DOCUMENT RESUME

ED 144 449 HE 009 232

TITLE	Perspectives for the Future System of Higher Education.
INSTITUTION	Hiroshima Univ. (Japan). Research Inst. for Higher Education.
PUB DATE	Apr 76
NOTE	152p.; Report of the Hiroshima International Seminar on Higher Education (Hiroshima City, Japan, April 1976) ; Statistical sections may be marginally legible due to small type
AVAILABLE FROM	Research Institute for Higher Education, Hiroshima University, Hiroshima, Japan
EDRS PRICE	MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS	*Access to Education; Conference Reports; Educational Change; *Futures (of Society); *Higher Education; International Education; *Organization; *Organizational Effectiveness

ABSTRACT

Conference speakers addressed four themes: (1) higher education in transition (2) access to education; (3) structure; and (4) the future system of higher education. In the first session, addresses were: higher education in transition (Shigeto Tsuru); and ice age or new horizons (Clark Kerr). In the second session, they were: access versus admission (Isao Amagi); and access to mass higher education (Torsten Husen). The third session's addresses were: the European structure of higher education (Henri Janne); and strains in the growing structure (Michiya Shimbori). The concluding session was a discussion of the previous topics, with Toshiya Abe and Harlan Cleveland as rapporteurs, and summaries are given. (MSE)

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ED144449

Report of the Hiroshima International Seminar on Higher Education

Perspectives for

THE FUTURE SYSTEM OF HIGHER EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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HE 009 232

Research Institute for Higher Education
HIROSHIMA UNIVERSITY

Report of the Hiroshima International
Seminar on Higher Education

Perspectives for

THE FUTURE SYSTEM OF HIGHER EDUCATION

Research Institute for Higher Education
HIROSHIMA UNIVERSITY

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Preface

It is a great honor for Hiroshima University to be the sponsor of the Hiroshima International Seminar on Higher Education. The Seminar was organized by the Research Institute for Higher Education which was founded at Hiroshima University in 1970 in response to the problems of reform then facing the university community. I take firm belief in the fact that forces to develop and guarantee the future of mankind reside in spiritual as well as intellectual activities of the people, and the center of those activities are the universities. The Research Institute, in studying the issues involved with higher education in a most fundamental and academic manner, is profoundly concerned with human themes. This seminar has attempted to locate some soiutions to the various multi-faceted problems facing higher education today, and thus those of utmost importance to the future development of society.

With Dr. Nagai's, Minister of Education, Science and Culture, active cooperation, the International Seminar was planned to coincide with the visits of the Directors of the International Council for Educational Development (ICED) to Japan. ICED was formed in 1970 as a privately financed international association of educators which would be a private group of persons concerned with educational development out of the field of education itself, government officials, and people from the world of business and law selected as individuals rather than as official representatives from various parts of the world who are deeply concerned with education on an international scale. ICED is not a research institute although it promotes research activity. Dr. Perkins explained that ICED is not only concerned with studying different national systems and national problems, but also with the much more complicated and more important matter of learning how to study with a different national system. This does not mean to put other systems of higher education under a particular microscope, but to seek out opposite numbers in various parts of the world to find ways to collectively, on the basis of equality, examine common problems. Dr. Perkins said that this is based on the faith that ICED

can make "some small contribution to developing an international style of examining higher education, and that we have evolved a network of connections that will make it possible to deal with matters far larger in scale and far more international in scope than would be the case if we were looking at overseas matters through just a pair of national eyeglasses."

Dr. Nagai spoke about the necessity of an international perspective and cooperation for the future development of the university. As the theme for this seminar shows, there is some doubt as to whether the traditional university centered higher education can adapt itself to the rapidly changing society, and as to whether it can function in this society as an effective organ. Dr. Nagai mentioned his Ministry's efforts to make Japan's higher education system more versatile, diversified and flexible but emphasized that these problems cannot be solved on a single-nation basis. Higher education for all the peoples of the world and a higher intellectual standard for humanity are the shortest ways for building world peace.

The fact that this seminar was held in Hiroshima, where the error in human wisdom was proved in the most tragic way, heightened the sense of urgency in dealing with the main issue before us, the future direction of higher education.

Soichi Iijima
President, Hiroshima University

PROGRAM OF SEMINAR

(22nd—23rd April, 1976)

1. **Sponsor and implementing organ**: Hiroshima University
2. **Title**: Hiroshima International Seminar on Higher Education
3. **Theme**: Perspectives for the Future System of Higher Education
   —Access and Structure—
4. **Dates**: 22nd to 23rd April, 1976
5. **Place**: Hotel Hiroshima Grand, Hiroshima City, Japan

CONTENTS OF SEMINAR

I. Themes and Speakers

1. Introductory Session (Keynote Addresses)
Higher Education in Transition
Chairman: Soichi Iijima (President, Hiroshima University)
(1) Shigeto Tsuru (Professor Emeritus, Hitotsubashi University)
(2) Clark Kerr (Chairman, Carnegie Council on Policy Studies in Higher Education, Berkeley, California)

2. First Session : **Access**
Chairman : Hans Leussink (Former Federal Minister of Education and Science of the Federal Republic of Germany)
(1) Isao Amagi (Special Adviser to the Minister of Education, Science and Culture, Japan)
(2) Torsten Husén (Professor, University of Stockholm)

3. Second Session : **Structure**
Chairman : Tetsuya Kobayashi (Professor, Kyoto University)
(1) Michiya Shimbori (Professor, Hiroshima University)
(2) Henri Janne (President, Collége Scientifique, Institut de Sociologie, Université Libre de Bruxelles)

4. Concluding Session (Symposium)
The Future System of Higher Education
Chairman : James Perkins (Chairman, International Council for Educational Development, New York)
Rapporteurs : (1) Harlan Cleveland (Director, Aspen Progam in International Affairs, Princeton, New Jersey)
(2) Yoshiya Abe (Head, Exchange of Persons Division, Japan Society for the Promotion of Science)

PURPOSE OF SEMINAR

As we enter the last quarter of the twentieth century, higher education around the world is challenged with the fundamental issue: "Will the contemporary systems of higher education be able to respond effectively to the emerging individual and social demands?"

Although higher educational opportunities vastly expanded during the decade of the sixties, the traditional institutional forms were unable to respond adequately to the continually diversifying individual and social demands. The severe social strains and pathologies generated by this situation has dampened public enthusiasm for uncontrolled educational expansion. While clearly it will be asking too much of the existing institutions to shoulder the full burden of responding to the emerging demands, it is also doubtful that contemporary societies have the resources or the will to support the development of a large number of new institutions.

Under these circumstances, what changes in contemporary higher educational systems might facilitate an effective response to the changing social situation, and will it be possible to transform existing systems in these directions? These are the urgent questions that educators around the world are struggling to answer.

With these questions in mind, this seminar on "Perspectives for the Future System of Higher Education" will consider the following issues:

1. Higher Education in Transition

From a comprehensive perspective which takes into account the cultural, social, political and economic conditions of contemporary society, what is the nature of the changing articulation of higher education to its many environments?

(Theme of the Introductory Session—Keynote Addresses—)

2. Access to Higher Education

To what degree have contemporary societies guaranteed public ac-

cess to higher education, what are the problems surrounding access, and what steps should be taken in the future to respond to the rising popular demand for access to higher education?

(Theme of the First Session)

3. The Functions and Structure of Higher Education

What are the problems and contradictions that follow from the way in which higher education is organized and the functions it attempts to fulfill? In response to the emerging individual and social demands, how should higher education alter its structure and functions?

(Theme of the Second Session)

4. The Future System of Higher Education

Building on the earlier discussions, what are the characteristics of the higher educational systems that contemporary societies should be attempting to develop as they approach the 21st century and how likely are they to be successful in these endeavors?

(Theme of Concluding Session—Symposium—)

With these questions and focusing on access, functions, and structure this seminar will consider "The Future System of Higher Education."

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I

INTRODUCTION

HIGHER EDUCATION IN TRANSITION

Shigeto Tsuru
Professor Emeritus, Hitotsubashi University

1. In what sense do we speak of higher education being in transition? To some extent in Japan, but probably more pronouncedly in the United States, the problem posed reflects the situation where the gratifying correlation between the rate at which college graduates are produced and the capacity of the economy to absorb them is no longer as indisputable as it used to be.

Why is this? Is this because higher education has failed in the job of preparing students to move from the world of schooling to the world of work? In other words, is it not sufficiently responsive to market demands?

This may well be the case. The declining success of proprietary schools to fulfill this goal— I presume that most of you know what is meant by "proprietary schools" in the United States—and various experiments of "cooperative-education" program—this, again, is a special term, I believe, used currently in the United States but may not be very well known in Japan or elsewhere—of smaller colleges and universities in the United States like Northeastern University in Boston leads us to suspect that this indeed is the case.

At any rate, in the United States, the percentage of male high-school graduates enrolling in colleges has come down to 49% in 1974 after hitting the high of 63% in 1968;[1] of course, this may have been caused by special circumstance of the Vietnam War; and at present it is estimated that unemployment stands at around 15.4% for new degree holders in the humanities and at about 16% for social-science majors.[2]

Economists of the "human capital" school (which postulates that

1) Walter Guzzardi, Jr., "The Uncertain Passage from College to Job," *Fortune*, January 1976, p. 128.
2) *Ibid.*, p. 168

people go to colleges because they get a better return on their invested capital than they would if they made alternative investments)[3] are now more confident than ever of the predictive power of their theory.

2. In Japan, higher education is not yet so widely spread as in the United States. The percentage of those who are enrolled in higher educational institutions (including junior colleges) among the population of same age group is now about one-third; and this ratio appears to be still on the increase.

And at present (in 1974) the composition of new entrants to job market fresh out of three categories of schools is as follows:

	Graduates	Entry Ratio to Job Market	Entrants to Job Market	(Composition)*
Middle Schools	1,623,527	7.7%	84,518	(8.1)
High Schools	1,336,264	48.0%	626,989	(60.3)
Colleges	430,921	76.3%	329,027	(31.6)
Total			1,040,534	(100)

* The figures in brackets are percentage ratios to the total. Source: Monbu Tokei Yoran, 1975, pp. 76-77.

It may be noted from this table that in the case of high schools about 1.3 million young people graduated in that year, of which just about one-half, or 48%, entered the job market. In the case of colleges, 430,000 graduated in that year, of which 76% entered the job market. A large number of girls did not enter the job market, so about 76% to 80% probably has been the maximum we have been able to attain in the recent years.

Now this made up the total entrants to the job market of just about one million in that year, which is composed of only 8% coming from middle schools, 60% from high schools, and 31% from colleges. Even in the United States it is estimated that only 15% of the members of the 90-million-strong work force have a college degree.[4] Of course, there

3) This school is contrasted to what might be called "comsumption value" school —the school which values higher education as final goods and services of consumption rather than intermediate service, which is similar to investment.

4) Guzzardi, *op. cit.*, p. 172

has been a historical change, and the younger generation of job-holders is most likely to have a higher percentage of college graduates among them. But one expert opinion (that of James O'Toole, an assistant professor at the School of Business Administration at the University of Southern California) points out that by 1980 there may be 2.5 new holders of college degrees competing for every college level job.[5] This is because they are likely to be "over-qualified" — the term which I think has come into vogue only recently in the civilized world.

What is the market demand picture in Japan?

If we take as our sample the case of National Railroad Corporation, we find that of the 430,000-strong work force now employed by the Corporation only 7,700 hold college degrees among whom 800 are medical staff. Altogether they constitute only 1.8% of the total. Even if we count as equivalent of college graduates those (numbering 5,800) who after entry into the corps of employees received special training at the Corporation's own higher education center, the ratio of college graduates (in this broad sense of the term) to the total rises only to 3.1%.

We have, however, a more representative sample survey conducted by the Keizai Doyukai at five-year intervals designed to show the composition of *new* employees by school-levels-graduated among the corporations listed in the first division of Tokyo Stock Exchange. Samples were chosen at random to number one half of the total in the list. In the manufacturing sector, the composition obtained was as follows:

	1960	1965	1970	1975
Middle Schools	13,080(37.9)	22,814(37.4)	19,637(21.5)	4,621(8.1)
High Schools	15,422(44.7)	29,557(48.2)	59,170(64.9)	37,372(65.5)
Colleges	6,013(17.4)	8,993(14.6)	12,319(13.5)	15,057(26.4)
Total	34,515(100)	61,364(100)	91,126(100)	57,050(100)

From this table it can be seen that in 1960, 1965 and 1970 the percentage occupied by the college graduates was anywhere between 13 to 17 %, with an average of about 15%, but the percentage occupied by middle school graduates declined gradually from 37 to 21, which was offset

5) *Ibid.*, p. 128.

by the increase in the percentage occupied by high school graduates, from 44 to 65. 1975, last year, was a special year because of the depression. Middle school graduates occupied only 8%, which was offset almost entirely by college graduates, which occupied 26%. Since the samples were chosen out of the biggest corporations in Japan (the average number of employees being 7,790), the composition here tends to exaggerate the relative weight of the category of college graduates.

In any case, it is certain that the entry ratio into the tertiary education (which was 34.7% in 1974) will keep on rising in Japan. Some sanguine analysts predict that it may go up to the level of 45% or higher by 1985. (Among the Tokyo residents it was 59.5% in 1974.) If it does, the need for interfusing the curriculum with "occupational awareness" may become as important in Japanese colleges as it seems to be in America today.

3. As a matter of fact, in the Final Report (1971) on the needed educational reform, the Central Council for Education of the Ministry of Education recommended that institutions of higher education should be so reconstituted as to be "more responsive to social demand," and that for this purpose a greater variety of institutions be created to meet specific needs.

A great deal of discussion ensued subsequently the stated desideratum of becoming "more responsive to social demand." The opinion of Japanese students, including some of the faculty members, in this regard has stood somewhere between France and the United States today. As we read in the newspapers, France is now encountering student strikes protesting Madame Saunier-Séité's proposal to vocationalize some of the training in the second year in college. In the case of France, unemployment today is about one million; of whom one-third are under 25. Some 160,000 students, much less than in Japan, graduate from college each year, and about one-half of them cannot find a job. The university student population in France has doubled in the past ten years to 820,000, about three times as many as in Britain, and I can easily understand that Madame Saunier-Séité, Secretary of State for the Universities, felt obliged to propose more vocational training in colleges. But students are striking in protest.

In Japan, too, there has been some disturbances against the recom-

mendation of the Central Council for Education to make our college training "more responsive to social demand," whereas in the case of the United States, I think, the situation is somewhat different. I do not have much information first-hand, but as far as I can gather from various publications, I find that a statement by Mr. T.H. Bell, U.S. Commissioner of Education, to be somewhat typical. He said that imparting salable skills—the skills that can be sold—was the first and foremost requisite of education; and he added to this sentence: "To send young men and women into today's world armed only with Aristotle, Freud, and Hemingway is like sending a lamb into the lion's den."[6] And actually, some of the student body in the United States are bearing down upon the faculty and administrators, insisting that college must give them an edge in the competition for jobs by equipping them, in the phrase of Bell, "with salable skills."

Here, clearly, a distinction is called for between "demand" and "needs." Social demand in a society like ours is essentially the demand of predominant entities engaged in economic (therefore, labor demanding) activities, i.e., market-oriented private enterprises. Proprietary schools in America have been successful because of one fundamental common strength of theirs, namely that they are market-responsive enterprises that must satisfy their consumers (business firms) in order to stay in business. In contrast, colleges and universitites of the traditional type have been, as the cognomen "ivory tower" so aptly described, isolated from the day-to-day activities of the society and actually found their strength in being so.

But the dictate of the market is usually myopic and profit-oriented, which adjectives incidentally are not meant to be pejorative. Capitalist economy in fact draws its strength from the effective operation of such markets. On the other hand, social needs are something different. These are meant to reflect objective desiderata with a longer run perspective incorporating within them ideals and aspirations of the society which may often call into question the very salutariness of the existing institutions. Market-oriented private enterprises are hardly the agent which can speak for what social needs are.

It is much more appropriate to say that institutions for higher education should be responsive to "social needs" rather than to "social

6) *Ibid.*, p. 127.

demand."

4. What then are concrete contents of social needs today, especially as they impinge upon the tasks of higher education? Social scientists are agreed nowadays that the proverbial sorcery of the Adam Smith's "Invisible Hand" no longer has its sway and the fact of "market failure" is prevalently here with us. Phenomena of environmental disruption constitute a notable example of the market failure, and social needs indicate that the importance of such externalities be foreseen and forestalling measures be taken at least to prevent lethal damages. Where could we have looked for disinterested guidance in such matters but in the academia? Regrettably, however, the leadership in our fight against environmental disruption, at least in Japan, came oftener from local lay citizens than from academic experts in the field. (The methylmercury pollution in the Minamata area is a case in point.)

In fact, there is a large area in our society where independent thinking dissociated from the market interest is in the position to contribute towards identifying and promoting social needs of the population as a whole, such as urban problems, the land-price problem, transportation problem, energy problem, etc. These problems, with which especially a country like Japan is now beset, require independent thinking dissociated from the market interest today.

But focusing more closely upon the tasks of higher education from the standpoint of social needs, do we not come back to the simple and basic truth that what we expect of higher education is that we produce highly educated people? Or, we draw out full potentialities of people, not through imparting ready-made knowledges upon them, but through inculcating the spirit of radical inquiry and of exploratory methodology for opening up new horizons and also by familiarizing them with the tools and instruments for making decisions and taking actions? The four years in college, after all, are an interlude, especially in the case of Japan, between an apprentice period of severe constraint for entrance into the elite course of higher education and a semi-permanent period of serviceman in the discipline of market-oriented enterprises. Indeed, it is a precious interlude during which one may be able to acquire an enduring sense of values which is essential for a fuller appreciation of life thereafter. In the era where value judgements are becoming more and more

important, such an interlude is, we may say, truly invaluable.

5. Posing anew the problem of what we expect of institutions of higher learning by way of providing values (either "consumption values" or "intermediate services" in the economists' jargon) to the youths in their most formative period, we may point out the following ***three*** dimensions which constitute the tasks spelling out the ***raison d'être*** of colleges and universities:

(1) Liberal arts education
(2) Transfer of knowledge on the facts of social reality
(3) Preparatory training for vocations

Of these, I consider the first and the second to be the ***sine qua non*** for the younger generation to gain perspective in the longer run social needs pertinent to the society in which they are going to be the main architects and/or the sufferers as the case may be.

I mention the second point in particular because the facts of social reality are usually extremely complex, often contradictory, and at times brutal and disenchanting, and the senior citizens of the society—which teachers are—are in the position of being able to transfer the accumulated world knowledge they have acquired.

Let me give you an example from a story which Lincoln Steffens—that inimitable American journalist of the gilded age—tells of his encounter with President Eliot of Harvard University. The story, incidentally, is peculiarly pertinent to the current political situation in Japan where what we call "structural corruption" is shaking the very foundation of our yet immature democratic society. He wrote in his ***Autobiography*** (pp. 607-8):

> It was at the end of his term, just before he gave way to President Lawrence Lowell. Meeting him one day in the Yard, I joined him and proposed that he let me give a short course to seniors on "the forms in which the first steps to bribery and corruption come to young men in all walks of life." He was interested enough to let me give examples of what I would teach.
>
> "A young lawyer is sent to court to ask for a postponement of a case. He fails to get it, and another, older young attorney goes and gets it. The failure asks the success how he did it, and the

success says he tipped the clerk of the court. The failure learns thus a lesson which he applies thereafter so well that some day later you find him in the lobby at Hartford or Albany 'tipping' legislators and never knowing that he is a briber."

President Eliot liked this, an actual story; he stood and drew out more and more. He was moved almost to a consideration of my proposition till he happened to ask me what my course would lead up to.

"You would teach those things to stop the doing of them?" he asked.

"Oh, no," I blurted. "I don't mean to keep the boys from succeeding in their professions. All I want to do is to make it impossible for them to be crooks and not know it. Intelligence is what I am aiming at, not honesty. We have, we Americans, quite enough honesty now. What we need is integrity, intellectual honesty."

That ended me with Mr. Eliot. He gave me a piercing look, a polite bow, and walked on to his office.

Now, intelligence, strengthened by the knowledge of such facts of social reality, combined with liberal arts education, I believe, will be the strength which will enable the younger generation in colleges to find by themselves what the social needs are.

6. However, the logic of market-place impinging upon institutions of higher learning is quite pervasive, and the "vocationalizing" of such institutions may to some extent be unavoidable; in fact, it could have some positive merit. Colleges and universities should certainly keep their eyes wide open to the reality of the changing social situation and adjust and/or reform themselves autonomously to it.

But one thing which appears to be of overriding importance—the matter which in the true sense make the transition of higher learning necessary – is the increasing need of integrating value judgements into man's manifold activities in the modern world. I remember more than forty years ago reading a lecture given by John Maynard Keynes, one of the most perspicacious of the men in our profession, who spoke in Madrid on the economic possibilities for our grandchildren, and concluded that the day might not be all that far off when everybody would be rich. We shall then, he said, "once more value ends above means and prefer the

good to the useful" "But beware!" he continued. "The time for all this is not yet. For at least another hundred years we must pretend to ourselves and to every one that fair is foul and foul is fair; for foul is useful and fair is not. Avarice and usury and precaution must be our gods for a little longer still. For only they can lead us out of the tunnel of economic necessity into daylight."

Forty years have passed since he said this. Are we not closer to the period or age when we can once more value ends above means, prefer the good to the useful? I believe that in spite of the fact that affluence has not come to the stage which Keynes hoped it would, we have come to the stage in our history where we have to pay more attention to the value judgements. For example: (1) the need for technology assessment and even the need for reflecting upon the moral aspect of scientific endeavor itself; (2) social sciences becoming just as much a type of inquiry requiring value judgements as that of cause-and-effect inquiry; (3) man's relation with nature itself now partaking of a moral aspect as exemplified in the concept of the Spaceship Earth; and (4) international relations now subject to an imperative of narrowing the widening gap of incomes between the developed and the developing, America enjoying $7,000 per capita GNP while India is hovering around $100 and Japan about $3,000. A Japanese young lady working in the office spends singly more money during one year on her hairdo than the entire income which a single man in India for his livelihood.

All these tasks imply a challenge —a challenge which can be met, not piecemeal, but only through an integrated efforts mobilizing broad knowledge, deep thinking and interdisciplinary cooperation. Could there be any better place for this than the institutions of higher learning?! Successfully to meet this challenge, I believe, is the tasks of higher education in transition.

ICE AGE OR NEW HORIZONS

Clark Kerr
Chairman, Carnegie Council on Policy
Studies in Higher Education

Higher education, as is true of most human institutions, is always in transition—sometimes faster and sometimes slower. The current period is marked by relatively rapid transition, not by the fact of transition itself. Our period is unique, however, not so much because of the rapidity of the transition, but more because of the directions of the transition.

My central theme will be the direction of the current transition—from what to what? My comments will be speculative since, while we have some idea of where we have been and even of where we are, we cannot be certain of where we are going. Yet we should like to know, both out of curiosity and so that we can attempt to guide the process or at least adjust effectively to it.

In advance, however, I should like to note that higher education has changed in the past less than most other human institutions. It certainly has changed less than the state and less than the economic enterprise over the past eight centuries. The early universities of Bologna and Paris are still recognizable institutions and have contemporary counterparts that are still in operation in somewhat familiar forms. This cannot be said of many or even most mechanisms of the state or of the economy.

This leads me to believe that the university of today, as the university of yesterday, may be changing less than most of the rest of society; that it is a relatively static institution; that it is not on the verge of either decay, as some say, or of a great transformation, as others hope; that it will keep on changing but less than the society around it.

There are good reasons why the university, which historically has been the dominant institution within higher education, is a relatively enduring institution. It has some enduring purposes, including the preservation of the records of past human development. Also, it has been given by most societies most of the time an exceptional degree of autonomy to

conduct its own affairs. It has taken a Napoleon in France or a Hitler in Germany or a Stalin in Russia to conquer the universities, and even then some elements of autonomy survived.

Given autonomy, the university has proven itself to be a highly conservative institution about its own affairs. The faculties are at the center of the enterprise. And, left to their own devices, faculties make few changes. They rule largely by consensus, usually defer to their older members, and often subscribe to the view that colleagues should not raise controversial matters that may be divisive. All this conduces to the preservation of the status quo. By and large, students accept the functional authority of the faculty and, in any event, come and go relatively quickly. And administrators tend to be given little authority, and they also come and go. These two sources of potential change are usually quiescent.

Beyond these factors, there has been no basic technological change affecting the operation of the universities since the invention of printing; although the new electronic devices may produce such a basic change. Additionally, beyond a certain modest size, there are no substantial economies of scale, and thus the university has not become as gargantuan as some governmental and economic enterprises.

If the above observations are true, we are studying the evolution of a relatively stable institution not given to great and sudden fluctuations in the course of its development, except as the society around it undergoes a revolution. Consequently, unless a societal revolution takes place, or some other cataclysmic event occurs, I foresee no apocalyptic change.

I should now like to discuss, first, the transition that I do not think is taking place, much popular opinion to the contrary, and then, second, the transition that I do think now surrounds us.

Let me note that I shall be talking mostly about the United States, and the higher education system in the United States has features which are quite different from those found elsewhere. Because something is happening in the United States does not mean that it has happened elsewhere or will happen any place else. Patterns in the United States are no longer so derivative from those in Western Europe, and they do not necessarily constitute a model that can be followed elsewhere.

However, higher education does have some elements in common across many countries. It is one of the most international of institutions. Faculty members, students and ideas flow back and forth among nations

in a way matched only by commerce and industry, with their flows of top personnel, of raw materials and finished products, and also of technology. Consequently, higher education constitutes more of an international community than do organized activities in most other areas of human endeavor.

There are particular elements of similarity between Japan and the United States. These nations are both advanced industrial societies that have placed great emphasis on their educational systems. Along with the U.S.S.R., among major industrial nations, they have the highest proportionate enrollments in tertiary education. Japan and the United States respond however, to social demand in determining their enrollments, rather than to management planning. These two nations, also quite uniquely, have strong private sectors within their higher education systems and make substantial use of two-year colleges. Thus, they have more than usual in common, including some common problems.

Golden Age to Ice Age?

A dominant view in the United States today is that higher education has seen its best days and is now experiencing its worst days with more bad days still to come; that having climbed the highest mountains, it is now descending into the lowest valleys. Part of this is true.

There was a Golden Age from about 1945 to 1970. Enrollments in higher education expanded enormously. There were three waves of veterans in attendance subsidized by the federal government—from World War II, from the Korean War, and from the Viet Nam War. The Civil Rights revolution brought many minority students into higher education who were soon followed by a higher proportion of women. Beyond these specific contemporary developments, higher education was moving from the stage of mass access, that had begun slowly with the land grant movement after the end of the Civil War, to a stage of universal access defined as a situation where every high school graduate with minimum skill requirements, or even just with a high school diploma, is assured of some financial aid if in need and a place for him or her in some tertiary institution.

Research expenditures of universities, basically from federal funds, began expanding with World War II and then again after the challenge of Sputnik. In the early 1960's, they were rising at a rate of 15 percent

a year.

Many new institutions were created. Community colleges were established in every state. Teachers' colleges became comprehensive colleges. Many colleges added the Ph.D. degree and quite a few did really become "centers of excellence" in science beyond the historic 10 or 20.

Higher education engaged great public interest and enjoyed high public confidence, and received huge amounts of new money.

No such advances had ever taken place before in national history. They are never likely to occur again in such a short period of time. As a result, there has been what I once called a "crisis of success." The "tidal wave" of students was accommodated, and there was no new wave in sight. Great research advances were made and, for a time at least, they seemingly exhausted the existing possibilities. School and college teachers were trained in large numbers, as were skilled personnel for a period of great economic growth, and some surplus training capacity was created in the process. University and college students and faculty members criticized society as never before—about civil rights, about the Viet Nam war, about the deterioration of the environment, and much else; and, by and large, while the criticism was accepted and even acted upon, it was also resented. There were some great triumphs but they were now over, and they had some costs. Recent great successes made current more modest accomplishments look like comparative failure; old triumphs became the background for what appeared to be new defeats.

But other things were happening too. The differentials paid to college graduates in the labor market declined substantially. The birth rate reached its lowest level in recorded history, meaning fewer future students and thus also a lesser need for teachers. New priorities attracted public attention. A recession and then a depression reduced federal and state revenues, and also private income.

Thus an Ice Age has been predicted by some and is feared by many; some even think they are already experiencing it. It has been suggested that enrollments will fall by 40 percent or even 50 percent, wiping out most of the private sector; that intellectuals, with their lives so frequently centered around the campus, are and will continue to be in disrepute; that faculty salaries, in real terms, have fallen and will keep on falling; that research funds, in real terms, have declined and will keep on declining; that controls by state and federal agencies have greatly inten-

sified and will keep on intensifying. Perhaps never before in American history have so many in higher education seen so little of promise when contemplating the future.

Perhaps, but perhaps not. Comparative returns in the labor market have fallen for recent college graduates, but they have fallen to the levels of the mid-1950's which were at least moderately good. Also, there is more to a job than the entrance salary; there is getting a job at all and the prospective lifetime income it will generate. There is more to a job than income; there is net satisfaction. There is more to life than a job; there is overall satisfaction. On all these accounts, it still "pays" to go to college. As a consequence, it is more likely that enrollments will stabilize than that they will decline.

Federal and state funds for student scholarships (except for veterans) are still rising, quite rapidly at the state level. Federal research and development funds in real terms are now stabilizing, even rising somewhat, and stand just below the level of their historic peak. State funds for higher education (and they are the chief source of institutional support) have risen not just in total but also as a percentage of personal real income right through the period of student unrest, the recession of 1970–1971, and the depression of 1974–1976; and the states are quite responsive to the popular will which still places a high valuation on education.

Higher education stands today at higher levels of support and activity than at any time in its history except for the most golden years of the Golden Age, and at least two new peaks are still being climbed, federal and state aid for students (other than veterans), and state aid for private institutions. Higher education has seldom in history both had it so good and felt so bad.

It does appear that the higher education community, just as it was too euphoric in the 1960's, is now too despondent in the 1970's. Reality was not then as good, and today is not now as bad, as its image in the academic mind. The Golden Age was mostly golden; the proclaimed new Ice Age, however, is little more than just a touch of frost.

Old Horizons to New Horizons.

The real transition is not toward too little to do but toward too much. The real problem is one of a touch of indigestion from too new, too heavy and too incompatible a diet. The transition is from limited

and more or less academic functions to unlimited functions. Higher education (or, better, postsecondary education or tertiary education) is increasingly utilized wherever it is thought that it may make a contribution to private or social welfare and sometimes regardless of the academic content of the contribution. It belongs now less to the academic guilds and to the upper classes, and more to the public at large.

The long history of higher education includes a secular movement from few to many functions, at first added slowly but more recently added rapidly. The early universities initially were limited-purpose institutions—mainly engaged in the training of professionals (such as lawyers, accountants and clerks) to assist with expanding commerce and growing local government (Bologna) or of scholars and priests to assist the church recovering from the "dark ages" (Paris). Later were added, at various times and in various places, the education of "gentlemen" as a more cultured aristocracy arose, and the training of high level civil servants as the nation-states became more important. Independent scholarship grew gradually in the course of this evolution, as did the function of social critic. The modern university began with the addition of scientific research, and the training of skilled persons to apply the new industrial technology; and modern military science served to encourage these developments. The service function was largely an outgrowth of science.

Now new functions are being added in the United States but not in the United States alone:

1) *Advancement of social justice.* The furtherance of equality of opportunity (and indirectly of earned income) is now a clear purpose. Universal access and "affirmative action" on behalf of minorities and women are two major aspects.
2) *Advancement of the quality of life.* More and more people are demanding education throughout their lives and for the purposes of consumption as well as production. Higher education is less and less just a preparation for adult employment, and more and more a part of one's entire life.
3) *Advancement of political reform.* Beyond scholarly criticisms lie organized attempts at political reform. The most massive attempts at this through institutions of higher education came from 1968 to 1970. Future attempts are endemic in modern society. (Politicalization of higher education can, and in some

places also does, take the form of using institutions of higher education for direct political indoctrination by the dominant element in society.)

Ahead on the horizon lie at least two more new functions:

4) ***Residual responsibility for youth.*** Youth is one major group (the other major group is made up of participants in the "structureless" labor market) not largely cared for in some organized fashion—not by the family, not by the welfare corporarion or welfare union, and not by the welfare state. It is often the outside of social institutions. Increasingly higher education provides a "holding pattern" for such youths (as does the military). Better integration of education with work and public service experience is clearly forthcoming.

5) ***Organized thought about the future of society.*** Also ahead may lie the function of thinking about society overall and in the long run, as Michio Nagai[1] has suggested. Global problems become more inter-related and complex. Not the market, not the bureaucratic plan, not corporate action, not specialized research can solve these problems. Some mechanism for rational thought about very large problems is needed for it will take sustained thought at the highest levels. This potential function has clear implications both for research and for the curriculum. The other new functions may be regarded by some as involving the vulgarization and massification of higher education. This new function, however, is clearly elitist in its implications.

The earlier (and continuing) series of functions of higher education, mostly concerned with (1) professional training, (2) consideration of individual ethics and behavior, and (3) pursuit of specialized research, are more essentially academic. Some, although not all, of the new functions are more quasi-academic—related to academic endeavors but only partially organized around academic principles and standards; one, however, organized thought about the future of society, is supremely academic.

1) *An Owl Before Dusk*, Carnegie Commission on Higher Education, 1975. ("Pour greater intellectual investment into possible solutions to these (global) problems." p. 44.)

The older series of functions is more oriented toward production, and the newer more toward consumption and toward social reform.

The older series is also more oriented toward individual endeavor, and the newer more toward collective behavior.

The older series of functions is also mostly related to what Alain Touraine[2] has called the "production and reproduction of the social order"; while the newer series involves more emphasis on transformation of the social order. Transformational functions are more controversial and more difficult to integrate both into higher education and into society than are reproductive functions.

The older functions, additionally, were, or at least became, reasonably consistent with each other, although there was always some strain between and among scholarship aud vocational training and moral indoctrination (the scholars *versus* the Sophists *versus* the moralists). The newer series introduced additional strains and tensions. The political reform function is more concerned with power than with truth; the welfare functions with need than with merit; and the consumptionist function with individual benefit than with ethical behavior.

Functions Limited and Functions Unlimited

Older series	*Newer series*
(1) Professional training	(1) Social justice
(2) Individual ethics and behavior	(2) Quality of life
(3) Specialized research	(3) Political reform
	(4) Responsibility for youth
	(5) Integrated thought
Emphasis	*Emphasis*
Academic	Quasi-academic
Production	Consumption
Individual behavior	Collective behavior
Reproductive	Transformational
Totality	*Totality*
Partially consistent or at least compatible	Inconsistent and to some extent incompatible

2) *The Academic System in American Society*, Carnegie Commission on Higher Education, 1974. p. 110.

I set these changing functions forth as a matter of description and not of advocacy, although I do advocate some aspects of some of them.

Most of the initiative for the current changes comes from outside higher education, as in earlier history. Historically, the training of professionals of civil servants, of technologists, even of gentlemen was externally induced; and science first began outside the groves of academia. Perhaps only the functions of humanistic scholarship and of social criticism can be said to have been largely internally generated. Now, efforts at political reform are also generated internally. Thus these might be said to be the selfchosen functions that are most central to academic desires and that must be most justified to society. Each of the older society-chosen functions has, however, been internalized. The newer functions (political reform largely aside), also, are mostly in response to external pressure—from public policy or from consumer interests. They are now in the process of being internalized and this process can be very painful as was the introduction of science into the classical college and university in the United States in the period of roughly 1820 to 1890.

Higher education is more a responding than an originating segment of society; and it must respond to much that, at first at least, it does not like. The great task now is to absorb the new functions while maintaining academic integrity, and while preserving and even enhancing the elite functions of research and high level professional training (the function of "integrated thougnt" may help accomplish this).

Higher education has new clienteles—persons from low-income families and adults;new controversies—over support for *versus* change in, or even destruction of, established society; new courses—in remedial work on the one hand and in leisure-time interests on the other; new types of teachers—more part-time and more applied; new standards for grading—avoiding defeat for students as well as rewarding victory; new admission standards or even none at all; new types of degrees and certificates; new methods of financing and of governance; new standards for accreditation —what the British once called the "Gold Standard" no longer suffices; new institutions—and the university no longer has such a central role.

There are, as a result of all this, likely to be more specific purpose institutions (such as the proprietary schools in the United States), and more largely independent specific purpose units within comprehensive institutions. Some of the same forces which I once suggested gave rise to

the "multiversity" are now fr-actionating other types of institutions as well and all of higher education-not just the university. Growth will be less within the same units within the same institutions, and more in new units of old institutions and in new institutions. Multiplication will be by division. There will be less of more of the same, and more of less of the same--more that is different.

Confusion abounds. It is more difficult to differentiate functions, and to coordinate institutions and segments. Conflict increases. The newer institutions challenge the older institutions. Questions proliferate. What should now be "autonomous" and under faculty control?; and what should now be "popular" and under market or under public control? Should the government subsidize consumption and political functions, or only production and welfare functions? Should an institution try to cover many functions; or should several types of specialized institutions emerge? Generally, it may be stated that public policy will need to move more and more toward differentiation of functions, of financial support formulas, of governance mechanisms.

Enrollments in the United States may be stabilizing temporarily but functions are expanding, and the latter is the more important phenomenon in the long run—the rapid accumulation of purposes. That is the main direction of the transition in which we are now involved—functions have expanded and purposes have fractionated. Centrifugal are replacing centripetal forces. Higher education is less of a unitary element within society; and tertiary education is more of aspect of all of society. The "learning society" is arriving and, in the course of this process, learning is distributed more throughout life and throughout many institutions. The learning institutions of old become comparatively less important quantitatively; although their qualitative position in society may be enhanced as the center for the production of new ideas and of the highest levels of professional personnel.

This implies an age of creativity, an age of advances and not of retrenchments, an age of possible progression and not of inevitable retrogression. The "wheel of education," Plato[3] said, "once set in motion, the speed is always increasing…" We are currently in the midst of a period

3) Benjamin Jowett, *Dialogues of Plato*, Vol 3, Oxford University Press, New York 1892.

of adjustment to a new historic acceleration in the speed of the "wheel of education."

II

ACCESS

ACCESS VERSUS ADMISSION

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Meaning of "Access"—a Right

I would like to analyze the theme of "access" from several different viewpoints. To begin with, we can find two kinds of implication in the word, "access". One is the right to receive higher education and the other is the ways and means of receiving higher education.

Historically speaking, during the era in which the educational system was not yet well developed, people who were able to receive an education, no matter at which level it might be, were severely limited. In comparison to the great majority who could not receive any education at all, receiving an education was in itself considered an honored privilege. Many people sought after this privilege, and as education came to be more highly valued, receiving education became the right of the people at large, and furthermore attendance at schools became a duty. Today in many countries, not only elementary education but also the earlier half of secondary education has become compulsory, passing over the state of being a basic right. Under this situation, access to elementary education or to secondary education is no longer a discussed issue. When one realizes that education has shifted from the privilege of a few to the right of many, further developing into the duty for all; and that compulsory education, initially established at the elementary level but nowadays extends into secondary education; and that the context of development is an undeniable issue, one must acknowledge that the discussion of access to higher education today is reflective of the context of the demand for the right of receiving higher education.

Meaning of "Access"—a Means

The second contextual meaning of access implies the means through which the realization of the right to higher education, as described above, becomes feasible. In this context, the means implies the organi-

zation of the school system in which higher education functions. Namely, a spread in the secondary educational system is prerequisite and this spread presupposes a spread and development at the level of elementary education. Even when secondary education has institutionalized a system channeling students by means of assigning them to general academic courses, vocational courses and technical courses, all of these channels must be open to higher education if access is to be broadened. If only special types or courses were allowed entrance to institutions of higher education, the means of access to higher education would be institutionally narrow. In any country the basic principle of educational policy is unfailingly placed on the equal provision of educational opportunity to all irrespective of their social status, economic condition, sex, or racial background. All the nations in the world are attempting to realize this basic principle, though in varying degrees. Access to higher education also must be dealt with in accordance to this basic principle. It must be emphasized that access to higher education can be secured only on the condition that the school system is well organized upon this principle at both the secondary and elementary levels.

Access versus Admission

The two implications inherent in the meaning of access to higher education discussed above have been identified from the viewpoint of those who desire to receive higher education. If one shifts his focus to that of "the object of access," that is to say, the institutions of higher education, one must necessarily identify the concept that corresponds to access. Tentatively I name this concept as "admission." I use this word with the implication that those institutions offer the aspirants the privilege of higher education. Higher education, meanwhile, must necessarily maintain a certain level of quality and require the entrants to be endowed with ability to meet with the demands of this level. Access and admission are linked by "the identification of ability for higher education." Examples include national examination systems appraising one's qualifications for entrance to universities, such as the G.C.E. (General Certificate of Education), baccalaureate, Abitur and qualification examinations sponsored by a third party such as the E.T.S. of the U.S.A., and the uniquely Japanese system of entrance examination which are prepared and given by individual universities. All of these examples prove the identification

of ability for higher education has grave significance as the link between access and admission in higher education.

Meaning of "Higher Education"

The meaning of higher education needs to be examined. Over the last two decades we saw a remarkable increase in the number of students and institutions of higher education. Higher education can thus be said to have reached the masses. Many structural changes took place during this period. To begin with, as the number of students in traditional universities increased, the interests and ability of students grew more diversified. In order to meet social demands on the one hand and also to accommodate the development of scientific research, traditional universities started to implement increasingly diversified courses of instruction. Thus, traditional universities began the trend of diversification and popularization. Subsequently there emerged new types of educational institutions with various objectives, (that are) clearly distinguishable from the traditional universities. All these institutions of higher education are characterized by a trend towards popularization and diversification. Higher education today, therefore, is not university education alone, and thus it has come to be called postsecondary education or tertiary education.

When one refers to the "access" to higher education, one must clearly identify which type of higher educational institution is being implied. The meaning of access differs in accordance with the different types of higher education. The appraisal of ability for higher education naturally depends upon the type of higher education and thus the criteria for admission necessarily varies. This broad definition of higher education places traditional universities in a difficult position in terms of the higher educational system. The enlargement, diversification and the popularization of traditional universities were initial features of the process of growth of higher education. As a Japanese critic commented, some segments of universities have already become "leisure industry for the youth." Nonetheless, in principle and in fact, universities continue to function as a prime source of intellectual creativity and to cultivate intellectual elites. Higher educational institutions other than universities have developed to meet various social needs—e.g. the need for a specialized and skilled work force. These higher educational institutions have also developed to meet the needs of individuals—e.g. the need for a shorter

period of education or for specialized vocational training. Among the many types of higher educational institutions, universities maintain their position as an "authentic" higher educational institution, regardless of changes in their content and activities. Generally speaking, people tend to look down upon higher educational institutions other than universities, relegating them to a second rate position. Moreover, in countries where there are many universities (like Japan, where there are now 422) a distinct difference in the level of education and research has emerged among the universities, and consequently, society tends to severely evaluate the individual institutions.

In short, with the growing sophistication and complexity of society a higher level of education is required for its members. It is commendable that access to higher education has become available to many and that a larger number of youth are enjoying higher education. However, with the popularization and diversification of higher education, new problems relative to the interaction between access and admission came to the fore.

Relation between Higher Education and Secondary Education

Discussion of access to higher education is incomplete without examining the relation between higher and secondary education. Examination of this issue must include the viewpoints of both the side of secondary education and that of higher education. Looking at the side of secondary education, access to higher education in some cases is restrictive, e.g. an academic course being the only path to higher education, and in other cases access to higher education is non-restrictive, e.g. not only academic courses but also non-academic courses or types being paths to higher education. Secondly, the policy and method of determining admission to institutions of higher education greatly influences secondary education. When admission is very restrictive and competitive or when the method of admission is rigidly fixed in terms of the level and trend of the contents of testing, higher education's policy of admission gravely influences the mode of education in secondary schools. In those cases, secondary education tends to be forced into emphasizing an examination-oriented mode of education. This tendency is particularly true of today's Japan. I mention this since this is one of the most serious problems we face today.

Relation between Higher Education and Society

The relation between higher education and society is relative to the issue of access to higher education. To meet an ever expanding level of social, economic and technological development, society places various manpower demands which are sensitively met by the higher educational system. Aspirants to higher education also are mindful of this close relationship. The social career of the graduates of a certain course or a certain institution of higher education is a factor that significantly influences the aspirants of higher education. Dealing further with the social career after graduation from an institution of higher education, one must take note of the society's employment structure. This point may not be universal and may be peculiarly Japanese. But the discussion of access to higher education cannot become a real issues unless this question is given thorough consideration.

So I would like to briefly comment on this problem. As is frequently referred to, the major characteristics of the employment structure in Japan are found in the system of life-long employment and a pay scale which escalates in proportion to seniority. Business enterprises, furthermore, have always retained strong interest in in-service training of both formal and informal types, and have eagerly sponsored such programs. Those three elements—life-long employment, the seniortiy weighted pay scale and the in-service training programs—together functioned to build up the employee's loyalty to the company. And the companies have been organized like a kind of pseudo-family—an '*Ie*' system.

In recent years these systems have become somewhat weakened and the demerits of these systems are often cited by critics. The basic structure, however, does not seem to be going to change in the near future. The better an enterprise is and the stronger these characteristic systems are, the more strongly graduates from universities desire to enter such companies. Business enterprises, on the other hand, hope to secure their employees' devoted loyalty by insuring life-long employment. And thus, since entering employees are expected to remain in that company until retirement, the company does not mind the expenses involved in training its employees. Consequently business enterprises seek to employ fresh university graduates with high potential. There is a prevailing assumption that graduates with high potential are to be found at only several good universities; recruiters thus select from such universities

first. High school graduates compete to enter those few universities of good reputation with the expectation of a bright and secure career after graduation from the university.

The institutional arrangement leading to higher education is well set up in Japan and virtually no obstacle exists for anyone wishing to proceed to higher education. Nonetheless the access to higher education is a rigorous task to many high school graduates, solely because they compete in the entrance examinations of a limited number of good universities. Even words like "entrance-exam war" and "entrance exam hell" are in vogue. An objective definition of good universities, however, is extremely difficult. In Japan today, the reputation of a good university is established by the number of graduates who get recruited by leading business enterprises.

Ironically, this problem has outgrown the scope of education *per se*. Within the general trend of popularization and diversification of higher education, extremely competitive access and admission has grown into a grave social problem in Japan.

As has been revealed by the above remarks, the issue of access to higher education must be reviewed in the total framework of the educational system, particularly because secondary education has reached a widespread level of development, and also because higher education is now in transition. Furthermore the social climate supporting the higher educational system must be examined, especially when one discusses the issue in regard to Japan where higher education and the social system are in close interaction.

Perspectives on Future Access

In closing, I would like to present a few directions, or future perspectives. The problems concerning access and admission are educational as well as social, but if one focuses on educational problems, one finds them closely related to the state of higher education at this turning point. The future of higher education appears to follow the trends below.

With an ever growing diversification in the concerns and ability of students, higher education in general will be required to become structually diversified. This will include the demand for diversification of curriculum as well as diversification of types of higher educational institutions.

The directions of change of traditional universities are particularly significant. No one can deny that universities will continue to function as research institutions and training institutions for future researchers and highly specialized professionals. The future university must cultivate at the same time people with flexible ability, who will lead, support and be able to adapt to an ever changing society.

Higher educational institutions other than universities are expected to overcome their second rate citizen status and attain more legitimacy in society by proving their own raison d'être. Their success is dependent upon their own efforts and society's square evaluation of those efforts.

With an increasing participation of adults as an element of the recurrent system of education, higher educational institutions will become less monopolized by the young. In several countries such plans have already been implemented. With this trend becoming more apparent, one cannot limit discussion on the access to higher education to that of the young. One will be forced to take into consideration the problems of access for not only youths, but also for adult members of society. Incorporating higher educational institutions into a recurrent system of education has become an issue much discussed recently. Also, when dealing with the master concept of life-long education, higher education has been given significant emphasis.

Based on the perspectives described above, the following features seem to be foreseeable when we return to focus on the access-and-admission issue.

Heretofore, too much weight has been given to recruiting fresh graduates from secondary schools in dealing with the problems of access to institutions of higher learning. Similarly, too much attention has been given to traditional universities in the treatment of higher education. Consequently, the assessment for admission has been based exclusively on academic ablility and achievement as measured by the examination system. Such a bias must necessarily be reexamined.

In view of the increasing diversification of higher education, each educational institution must firmly establish its own objectives and mission in education, and clarify what kind of education it will provide. Each institution will face the need of amending admission policies and methods so as to be better able to identify the students' aptitude and ability in relation to the institution's goals. Especially needed are

methods of admission that will respond to the recruitment of strongly motivated adults with working experience.

Aspirants to higher education shall ideally come to select the type of educational institution or study that best meets their individual needs, rather than choosing it by the popular reputation of a so-called "good" institution. It is needless to say that a most important external element necessary for the solution of this access-and-admission problem, particularly in Japan, is to amend the current practice of business enterprises of recruiting fresh university graduates by virtue of their having graduated from a "good" university, and to establish the principle that a graduate gets recruited solely upon the basis of positive assessment of his or her ability.

Mobility of students among various higher educational institutions shall be encouraged. Structural flexibility shall be introduced to the whole higher educational system, so that, for instance, students who complete a short cycle course program may transfer to a four year program, and that students in a vocation-oriented program may transfer to an academic program and vice versa. An indispensable requirement in the diversification of higher education shall be the avoidance of such arrangements that may drive the aspiring students with renewed motivation and proven ablility into a frustrating dead-end.

I have made my remarks on the access-and-admission issue mostly as an issue of educational institutions at the undergraduate level. But, many problems concerning access to the massified and diversified institutions of higher education have remained untouched, for example, the training of researchers, admission into graduate schools, the relation between *access* to higher education and *success* in higher eduation. The issue of access today awaits approaches with broader perspectives, when the institutions of higher education have become an integrated part of the whole school system and the school system has come to interact closely with the social system. Each one of us must attempt to work out our own solutions, as the educational system of any nation should develop on the foundation of its unique historical background and social climate.

ACCESS TO MASS HIGHER EDUCATION

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Introductory Observations

Higher education in all parts of the world has for some time been a soaring enterprise both in terms of enrollment and expenditures. This applies equally to developed and developing countries. The Dutch Minister of Education, in a speech given at the 50th anniversary of the Catholic University of Nijmegen, pointed out that in 1974, 25 percent of the total education budget went to higher education as compared to 12 percent in 1950, at which time the total education budget was only 7 percent of the government expenditure as compared to 28 percent in 1974. This means that higher education had increased its share of total government resources eightfold in less than 25 years. The Dutch student population had risen from 40,000 in 1960 to 120,000 in 1974 (van Kemenade, 1975). A similar picture appears if one looks at enrollment statistics from other industrialized countries.

In view of such spectacular growth it is no wonder that ministers of finance and of education have begun to insist on some kind of checks on the staggering rise in costs. These checks are of two kinds. In the first place, in order to fulfill their role as institutions of mass education the universities have to gear their objectives, organizational structures, and teaching methods to the new requirements they face. Secondly, admission restrictions have to be imposed, be they called ***numerus clausus*** or something else. At the beginning of the 1970s, legislation to this effect was passed in several European countries. The Netherlands, the Federal Republic of Germany, and Sweden are cases in point. Central admission agencies have been set up and elaborate procedures instituted in order to select among a surplus of applicants.

The situation has become further complicated by the tremendous social demand for higher education and by the adoption of a philosophy

of recurrent or life-long education which makes postsecondary education, in one way or another, available to adults at any point in their careers. No longer is higher education only for young people of regular university age.

Higher education has also been the fastest growing sector of education in the Third World. The African ministers of education met in Lagos in February 1976 and among other things took stock of the development that had occurred since they met in Addis in 1961 and Nairobi in 1968 respectively. It was found that particularly primary education, and to a minor extent secondary, fell short of the targets; higher education, however, had grown faster (157 percent) than the 1968 target. In terms of absolute enrollment the growth factors from 1960 to 1972 were: 1.97 for primary education; 3.53 for secondary; and 3.72 for higher education. Similar figures could be quoted for the Latin American and the Asian regions.

A Historical Note

Well into the 19th century the *gymnasium*, the *lycée*, or the grammar school were "primary" to the university (with their own preparatory classes). Then elementary schools, through legislation on mandatory schooling, became universal. Thus, it was not until the mid-19th century that the institution preceeding the university got a recognized role in terms of the academic competence it was to provide. By that time a matriculation or "maturity" examination, such as the *baccalauréat* in France, the *Abitur* in Germany, or the General Certificate Examination, Advanced Level in England, became a uniform entrance ticket to higher education. Well into the mid-20th century such qualifying examinations were taken by a small social and intellectual elite and were often set and controlled by the universities.

The relationship between secondary and higher education historically has developed somewhat differently in the United States. The system of postsecondary education there, until the modern universities emerged, was dominated by the small-sized, relatively undifferentiated colleges catering also to a small elite. The classical liberal arts college served a society where education served to confirm one's elevated position in society rather than as an instrument of climbing the social ladder. When the new universities emerged in the late 19th century with graduate departments

and professional schools, most colleges preserved their character of upper-secondary school, as a rule acting *in loco parentis* like the *gymnasia*.

Recent Changes that have affected Access to Higher Education

The profound changes that have taken place in both higher and secondary education in the highly industrialized countries are epitomized by the title of Eric Ashby's book: *Any Person, Any Study*. Under the auspices of what OECD refers to as "recurrent" education, post-secondary provisions have become available to a rapidly increasing portion of both young people of traditional university age and adults sandwiching work and study. The offerings have become a "smörgåsbord" of greatest diversity, encompassing a spectrum of courses that runs from the most abstract and discipline-oriented highly academic courses, in the traditional sense, to the most practical and trivial ones.

While secondary education has become practically universal in several industrialized countries, its preparatory function for univesity entry has become less important. As enrollment in institutions of higher education has soared it has increasingly become evident that the entire concept of institutionalized education at that age level has become widened with regard to both the clientele and to the content of learning.

The most striking changes that have taken place under the auspices of the widened role of higher education could be subsumed under two main headings: (1) the "enrollment explosion" coupled with increased specialization and vocationalization of postsecondary basic programs, and (2) the admission of adult students with work experience to postsecondary education according to a planning strategy of "recurrent" or "life-long" education. These changes have radically affected the relationship between secondary and tertiary education and contributed to blur the borderline between them. The transfer from the first to the second has correspondingly become easier. The overriding problem facing a secondary school leaver, as well as an adult wanting to increase his occupational competencies and to enhance his career, is not primarily whether or not he will get into some kind of higher education but into what program he will be granted access. Even during the time when an elite took the qualifying secondary school examination the various programs and faculties had different attractions and prestige, which means that a selection on the basis of school marks or entrance tests had to be made among those

who were formally qualified.

The dilemma that policy makers in the mass education society face is how to reconcile the principle of egalitarianism of access with the necessity of selection to certain studies because of restraints of resources and/or risks of overproduction of certain types of manpower.

(1) ***The enrollment explosion.***

Whereas in Europe well into the 1930s the elitist secondary school dominated, enrolling some 5–10 percent of the relevant age groups, the U.S. high school already accommodated the majority of teenagers. With the raising of mandatory school leaving age in many European countries after the war, lower secondary education became universal. The 1944 Education Act in England, the 1959 decree in France, and the 1962 Education Act in Sweden are such examples.

The next step has been to broaden access to and diversify upper secondary education in countries which until very recently have catered mainly to an elite of academically oriented students heading for the university. Instead of enrolling some 10-20 percent of the relevant age group only, upper secondary schools in some European countries have almost reached the level of enrollment one finds at the junior and senior years in the U.S. high school. Concomitantly the programs have become diversified with a merger or at least a rapprochement between academic or theoretical subjects on the one hand and practical and vocational on the other. Correspondingly, the ensuing final examination has also become diversified. It has either, like in Sweden, been abolished altogether or become tied to more clear-cut specific qualifications, such as the new ***Abitur*** in the Federal Republic of Germany or the new ***baccalauréat*** in France, a result of ***la réforme Haby*** in 1975 (France, 1975).

According to the taxonomy of higher education suggested by Martin Trow (OECD 1974a) the boundary in terms of enrollment between elite and mass higher education could be set at 15-20 percent. With the widened role of postsecondary institutions in a system of "lifelong" or "recurrent" education the limit to "universal" higher education, 50 percent, might be exceeded within the next couple of decades.

(2) ***Adults in higher education.***

The notion of recurrent education derives from two basic ideas

which reflect overriding social and economic goals in many highly industrialized countries. In the first place, education has traditionally been conceived of as a structured package or sequence of learning opportunities institutionalized as formal schooling and taking place without interruption from the age of 5 or 7 until the end of mandatory attendance when the majority of the young people leave school in order to go to work. In a rapidly changing society, however, we cannot expect that the competencies acquired during a massive block of formal education up to the age of, say, 18 will suffice when it comes to coping with unforeseen tasks and situations which are themselves part of the changing pattern. The dramatic changes during the lifetime of an individual make it necessary for him to continue to learn more or less systematically all his life in order to fulfill his tasks both as a citizen and in particular as a holder of an occupation. One could therefore challenge the drive toward more and more formal schooling for young people and ask whether it would not be more beneficial for the majority of them to get away from institutionalized schooling earlier and to have the opportunity to return.

Secondly, recurrent education is an attempt to realize the basic social ideal of increased equality of options during the life career of a person. The overriding goal is to widen the range of options during the span of the working career. Recurrent education is thereby regarded as an "emancipatory strategy" to free the students and the system from the bonds of the environment and provide them with the tools they need in order to shape their lives individually and collectively. Freedom of options means among other things that it should be left to the individual to choose whether he wants to take full advantage of publicly financed education during his teenage years or wants to postpone further education until he has acquired work experience. This implies that he should have the option to use his "drawing right" either for additional education or for other purposes. He should also have widened options in terms of changing his occupation by means of the competencies he has acquired after completion of formal schooling.

The policy of widening the access to postsecondary education for both students who proceed straight from secondary school and for adults with some years of work experience has meant that entirely new criteria of admission have been introduced.

Strategies of Admission to Higher Education

Härnqvist (1974) has in a clarifying analysis of the role of individual differences in admission to higher education distinguished between three strategies: (1) competitive selection, (2) noncompetitive admission, and (3) adaptation through placement. Since the third of these in principle does not operate under resource restraints and therefore can be regarded as a purely academic exercise, I shall confine my discussion to the first two strategies.

Competitive selection has two basic characteristics: the number of applicants exceeds the number of places available, and the instruments of selection, such as grades, examinations, achievement and scholastic aptitude tests, are derived from *within* the educational domain. Criteria of competence achieved are not derived from the vocational sphere. Thus, both selection instruments and criteria of proficiency reflect internal educational evaluations. Educators want good and docile students, and the most secure way of achieving this is to apply their own criteria of assessment. This narrowness of criteria has certain consequences. In the first place, scholastic receptivity and docility tend to become overemphasized at the cost of other talents, such as practical and social intelligence and creativity. Secondly, the system tends to assume a certain social bias and counteracts efforts to bring about greater equality between various social strata and ethnic groups. Traits that constitute scholastic docility tend to be correlated with social background and are part of a social syndrome inherited from homes from which students for further education have traditionally been recruited.

Noncompetitive admission is a strategy whereby practically all applicants who meet certain minimum requirements with regard to their ability to benefit from higher education are accommodated within the system. This strategy has been brought to the fore during the last couple of decades by the tremendous diversification of the universalization of secondary schooling and its programs. The traditional qualifying examination from secondary school, be it *Abitur, baccalauréat,* or GCE A-level, can no longer serve in a pluralistic system of higher education as a uniform entrance ticket to a system of higher education that has become increasingly diversified and specialized. In addition to secondary school leavers, adults with work experience are entering institutions of higher

learning in growing numbers, most of them wanting short-term "packages" of training and very specific courses. These students have widely varying backgrounds in terms of formal education and work experiences, facts which must be brought to bear on their studies.

The admission problem then becomes one of determining the prerequisites which the students must meet in order to profit from higher education in general and from specific programs or courses in particular.

Entrance Requirements to a Widened Higher Education

During the last few decades one has begun to realize that life experience in general and work experience in particular count in considering qualifications for postsecondary studies. Brooklyn College in the 1950s, in launching a college degree program for adults from 25 to 60, tried to evaluate such experiences in terms of academic credentials in various cognitive fields.

The time-honored concept of the "educated man," schooled in the liberal arts, epitomized for a long time the objectives of the traditional secondary education that prepared one for the university. Entrants to the elitist univrsity possessed a common frame of reference of general education and values which accounted for the homogeneity of intake, intellectually, affectively, and socially. *Culture générale* or *Allgemeinbildung* means something different in a rapidly changing technological society than in a static one. A background in the humanities does not suffice any longer. The individual must be able to master basic concepts and principles in the natural and social sciences if his participation in the decision-making process is going to be safeguarded and if he wants to avoid getting lost in a world ruled by technocrats. This is also a requirement for the core curriculum of the university-preparing secondary school. In an era when scientific research has an increasing impact on our everday life, all students in the secondary school need to familiarize themselves with the processes of research not only in the natural and social sciences but in the humanities as well. Most of them can profit from being offered the opportunity to compare critically different sources of historical information or to experience hypothesis testing by means of laboratory experiments.

The broadened admission to postsecondary institutions for both secondary school leavers and of adults with work experience as well as

diversified offerings of programs calls for a more flexible and a less "one-dimensional" assessment of applicants.

I would submit that the common core of cognitive requirements for postsecondary education in the process of changing from an elite to a mass-oriented one is constituted by the following basic competencies:

(1) Communication skills, consisting of reading comprehension and ability to express oneself orally and in writing in one's mother tongue. Students in countries living outside areas where the world languages are spoken need good reading comprehension in at least one of these languages.

(2) Study skills which enable the student to pursue independent studies and to deal analytically with subject matter. Since such skills to some extent are by-products of formal schooling, applicants with limited background in that respect would have to undergo introductory, compensatory training in this field.

(3) Motivation to pursue studies that manifests itself in a willingness to sacrifice alternatitve competing interests. This is of crucial importance for those with limited academic background.

The Swedish Example

Sweden can be cited as an example of how access and entrance requirements to higher education have changed as a result of both the universalization of upper secondary school and increased demand for postsecondary education. It could also be cited as one example of countries which have been forced to introduce some kind of "total dimensioneering," whereby the total number of students admitted to higher education is determined by an act of parliament for each fiscal year (Sweden, 1975). The competencies required have been considered by two Royal Commissions. The first took as its point of departure the reformed *gymnasium* (upper secondary school for the 16–18year olds) that made provisions for 90 percent of the relevant age groups, while the traditional university-preparing *gymnasium* until 1960 accommodated only about 20 percent. The same Commission made a distinction between general and specific qualifications. According to legislation passed in 1972 the general qualifications were requirements for all kinds of higher education. They consisted of;

(1) completion of at least a two-year course of study in the *gym-*

nasium,

(2) competence in the mother tongue corresponding to the two-year course in the social line in the *gymnasium* and

(3) knowledge of English corresponding to at least two grades in the *gymnasium.*

At the same time a pilot program was launched according to which adults who had reached the age of 25 and had at least 5 years of work experience could be admitted *ad hoc* to certain courses or programs of higher education irrespective of their formal education.

Special qualifications over and above the general ones could be stipulated depending upon the applicant wanted to take. For instance, an applicant wanting to study engineering has to possess the qualifications in mathematics, physics, and chemistry provided by a three-year *gymnasium* course.

The second Commission was appointed to consider the implications for admission to higher education that were implied in the terms of reference and later the recommendations of the U68 Commission that drew up a completely new blueprint for higher education in Sweden. U68 (appointed in 1968) started its work when higher education expanded by leaps and bounds and the financial consequences were staggering even in an affluent country such as Sweden. The new system of higher education was announced as a major instrument of social equalization by providing opportunities for adults who earlier had missed out to go back to education under the auspices of the strategy of recurrent education. At the same time, however, it was made clear that financial restraints would make it impossible to universalize higher education. A document from the Ministry of Education which summarizes the new higher education act ensuing from the U68 Commission (S.O.U., 1973) states the matter like this: "The planning of higher education should be guided both by society's demand for skilled labor and by the educational needs of the individual. The number of students that can be accommodated must ultimately be determined by the resources which society is capable of providing. .....The number of students all over the field of higher education and also at the individual institution must be planned on a more regular basis in order to guarantee a balanced development without drastic fluctuations in the number of students and thereby to obtain an effective use of the resources totally available." Admission to certain areas

of postsecondary education, such as medicine or civil engineering, has for a long time been restricted. This will now also apply to what hitherto have been open faculties—arts, natural sciences, and social sciences. "This means that the supply of courses (in these faculties) are regulated centrally relatively strictly." (Sweden, 1975, p. 92 f.)

Applications for admission are submitted to a central agency within the office of the Chancellor of the Universities.

The second Commission, appointed in 1972, suggested in its recommendations submitted in 1974 (S.O.U., 1974) that in addition to school leaving marks from the *gymnasium*, which for a long time have been used as a selection instrument for higher studies, one could also qualify on the basis of age, work experience, and aptitude test scores. The recommendations, particularly with regard to the use of aptitude testing, which is something altogether new in conjunction with selection for studies in Sweden, became the subject of a lively debate. In the final run it was decided that the applicants can, if they want, refer to their test scores but the scores cannot be used to their disadvantage.

The new legislation passed in conjunction with the U68 reform of higher education stipulated that in selection for programs of study, where there are more applicants than places, the applicants should be divided into four groups, *viz.*, group 1: applicants who have completed three years of *gymnasium*, which until recently was the uniform general requirement for entry into higher education; group 2: applicants with two years of *gymnasium* (mostly tracks with vocational programs); group 3: other applicants, most of them above 25 years of age and with at least 4 years of gainful employment; and group 4: applicants with qualifications obtained in foreign countries. The last group is allotted a set proportion of places in advance: not more than 10 percent. Group 1 through 3 are allotted places according to their respective shares of the total number of applicants. The selection within groups 1 and 2 is based on scholastic credentials, usually marks, and experience from working life. The two types of qualifications are weighed in such a way that young people who complete *gymnasium* will find it advantageous to go out to work for more than a year before proceeding to postsecondary education. But in order to provide students with outstanding academic ability the opportunity to transfer directly from *gymnasium* to higher education some 20 percent of the places in groups 1 and 2 are set aside

for selection on the basis of school attainments only. Selection from group 3 is based on experience from working life and, where applicable, the scores from a voluntary test of scholastic aptitude. Thus, a system of quotas has replaced the previous one based uniformly on academic attainments.

I think that the Swedish system of gaining access to higher education, even if it might seem extreme, typifies trends in the provision of access in European higher education. The uniform qualifying school-leaving examination that formally granted access is in the process of becoming diversified or even abolished altogether. Experience from working life has for a long time counted in the East European countries, since it is one way of putting the philosophy of polytechnic education into practice. Recently it has gained additional inspiration from demands for relevancy and cross-disciplinarity, not to speak of equality.

Concluding Observations

A strategy of noncompetitive admission that broadens the criteria of access beyond the purely educational ones no doubt serves a "learning society," where "continuing" or "permanent" education has become part of the adult career pattern, better than a strategy of competitive selection. In a system of mass higher education the majority of students—secondary school leavers as well as adults with background in working life—tend to have rather structured career plans which can be realized by means of acquiring marketable skills and specific competencies.

An overarching problem that has become increasingly acute in the process of "massification" of higher education—Sweden is a case in point—is whether such a system can be accommodated within the shell of the traditional university. Scholarly functions, such as basic research and graduate education, are pursuits for which by definition few are selected, even if many feel that they are called. Nobody would seriously argue for an "open" or universal admission to graduate departments. The latter are the institutionalized organs in society for the extension of the frontiers of knowledge and for educating new generations of researchers. They therefore have been labeled by Parsons and Platt (1973) the "academic core system."

Scholarly functions germane to a university easily come into conflict

with a system of vocationally oriented basic courses strictly tailored for the "production of brain workers."

The strategy of competitive selection applies when it comes to the recruitment of prospective researchers and scholars as opposed to the open or noncompetitive strategy in giving access to the broad menu of basic courses. Therefore, in the final analysis the conflict between the latter system and the core sector is one between egalitarianism and meritocracy.

Several students of the large-scale "multiversity," among them the present author, have raised the question whether the problem could be solved by separating research and graduate training on the one hand and the mass undergraduate course system on the other by assigning them to different decision-making and administrative machineries. The degree of institutional separation is a matter of convenience, depending among other things upon historical circumstances. It should be pointed out to those who think that research and teaching have forever been united in a harmonious marriage at the universities that it is a relatively new one in countries where it has actually occurred. It first took place in Germany in the 19th century and the alliance was copied in other countries, among them the United States just before the turn of the century (Veysey, 1965). In France the bulk of research goes on outside the universities at the *Centres de Recherche Scientifique.* In the Soviet Union research takes place mainly under the aegis of the academies, as it did in the rest of Europe before the middle of the last century.

Irrespective of whether the marriage between "massified" teaching at the basic level and research is dissolved or the partners are staying in some kind of loose relationship with each other, the present situation calls for different strategies of access to higher education. The noncompetitive one applies to students, many of whom are adults in their occupational careers, who are oriented toward acquiring as readily and efficiently as possible specific vocational competencies. The other category consists of students who are primarily intellectually oriented. Their major concern is not to prepare for a particular occupational slot but to broaden their perspective. They want the university to open up new vistas for them. It is primarily from this group that prospective researchers and scholars would have to be selected by means of a more competitive and selective strategy, where proven competence is the only criterion of selection. The problem is, however, that the borderline be-

tween the two categories of undergraduates is not always clear. Should they be brought into different types of undergraduate institutions, by admitting those with particular academic promise to research-connected institutions? How do we then safeguard a sufficient flexibility of the structure of higher education so that we do not lose too many potential scholars among those who enroll in the more open and vocationally oriented sector? Is it politically possible in countries with a national system of higher education to establish an elite sector within a system that purports to be an open one? These are interrelated problems worthy of further examination.

Editor's Note: For references cited in this paper, see the bibliography (pp.134–136).

III

STRUCTURE

EUROPEAN STRUCTURE OF HIGHER EDUCATION

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There are two kinds of structures to be considered in a discussion of higher education. First are the structures of the global postsecondary educational system—the university can no longer be "isolated." There are structural consequences on learning and research, especially in the university. The other structure is the power or decision-making structure of the teaching institutions, again the university in particular.

The Global Postsecondary Educational System.

Higher education until the Second World War was an ***elitist*** institution structured in two separated levels. The universities prepared students for leading functions in society—the liberal professions or high management positions in technics or administration—both public or private. The *Ecoles techniques* prepared students for specialized vocational jobs for the public or the private sector.

In France we have to put at the top—***higher than the universities***—the *Grandes Ecoles* which prepare, through a severe selective screening and training following secondary school, the "elite for the elite," able to manage the most important and technically sophisticated organizations of the nation.

In the United States the situation is less formal but similar: well-known universities and institutes, among the best in the world, are forming this "elite of the elite." Other good-or average-level universities play the general role of the French universities pertaining to the selection of the elite. French universities are on the whole more uniform than American universities, among which the calibre is very diverse.

Since the Second World War, the higher educational system, including the university, is no longer such an elitist institution, but has become progressively and rapidly a *mass* organization. Martin Trow

said a few years ago that the third step will be the "universal" one and that this phase was already initiated in the United States; but, with a few exceptions, in all our countries the enrollment in higher education has grown slowly in the seventies, so the future is in question.

The change from elitist to mass higher education is now transforming the structures of all the system. We will try to deliver characteristic data about this trend.

First, let me remark: the change consists essentially in a larger access, more open and easier, to higher education, and in a general tendency toward democratization due to general complaints "too severe" procedures of selection.

But what is very important to notice is that, inspite of this general trend, the structure producing a "super-elite" is maintained : the *Grandes Ecoles* still remains unchanged in France as do the most meritocratic institutes and universities in the United States.

But let us now list the transformation going on in the structures of higher education in the industrialized countries:

a) The dispersed institutions of higher education are more and more articulated to form a global system. When a "binary" model is maintained embracing universities and existing high technical schools, there is more flexibility than in the past (let us say less closed streams) and bridges allow one to go from one side to the other. But generally speaking there is now a "combined development model." For instance in Norway there is a partial reform of the university with close linkages between universities and the new net work of short-cycle "regional colleges" for rural areas or towns distant from the major universities. Other models tend toward a "comprehensive university" including new departments which in the past would have been considered inappropriate. Note in West Germany the *Gesamthochschule* and the Danish University Center projects involving two-year studies schemes. In France, "Instituts de Technologie" (I. U. T.), created with a special status inside the University, provide two years of study with a vocational aim and a spirit of applied knowledge. Remaining more "binary," the United Kingdom chose to upgrade the "Polytechnics"

to the level of the University.

b) Meeting the need of shorter university studies, not technical but aiming at the "general culture," France created the D.E.U.G.: ***the diplôme d'etudes universitaires generales,*** in a similar way the British now have the "Diploma of Higher Education." Since 1969 West Germany has created ***comprehensive universities***: in one of them, students participate in a common lower-level program for about two years and the result of the intermediate examination determines whether he has to begin a practice-oriented upper-level program for one year or a theory-oriented for two years; another model is composed by academic modules where most of the student's education consists of small active seminars; students are graded for their work in these seminars, rather than by a final examination.

c) As a model for the interpenetration of various kinds of studies, we can cite the ***University of California***, where we find now among its many campuses: the ***Extended University*** for adults, and the one hundred ***California Community Colleges*** which admit everyone with a high school diploma. Above that, in order to widen access to university studies, there are nine campuses which admit automatically the upper 12.5 percent of the graduating high school class, and nineteen California University and College campuses which admit the top 33.3 percent.

d) Bremen in West Germany and Roskilde in Denmark are based on interdisciplinary project-oriented studies. The university center of Roskilde is divided into three interdisciplinary faculties: ***Humanities***, ***Natural Sciences*** and ***Social Sciences***. Each of these is divided into "houses" or study units where the participants manage the organization of their work autonomously and the one man one vote, including professors and instructors, applies.

e) There are new well-known institutions like the British ***Open University*** or the ***Empire State University*** of New York, where the use of mass media or contractually negotiated programs are combined with a new pedagogical relationship based on self-managed learning. Here the universities try to motivate adults. Some other incentives are used in universities: in Sweden and Yugoslavia a man of 25 years old with five years of vocational experience is accepted directly into the university. At the University of Vincennes

(near Paris) people without a ***baccalauréat*** degree are admitted on the basis of an individualized program.

f) Another consequence is that mass higher education pushes the most selective part of studies more and more toward the end of the graduate studies. It follows that the necessity of postgraduate studies (of a generalized postgraduate level: "1e 3e cycle") is now recognized to meet the needs of our highly technical age. Here a severe selection plays a role based on sophisticated studies and research. And in fact we see in many good universities the most motivated students insisting on an increase in postgraduate studies.

g) One of the main results of the pressure arising from the "massification" of higher education is the stratification of the studies in three levels, very differentiated by the quality of their outlets:

- First are the studies for high liberal professional level and high management positions: medicine, engineering, law. Graduates coming from lower social strata become frequently specialized employees such as economists of "good schools," Ph.D.s of the sciences;
- Then come the professors of secondary level (special schools in many countries; in others, Faculty of Sciences or Humanities) with an average financial status and average social prestige;
- A third level are the non-specialized functions covered by the end diplomas: social sciences, economics in "bad" schools, psychological sciences, and others.

Here the equality of general access to higher education changes; the basis of this kind of selection is, generally speaking, the socio-cultural origin of the student.

It is obvious that the problems and the expectations of mass higher education are roughly the same in all industrialized countries and it is self-evident that same kinds of solutions would be invented.

The structures of the University are defined by ***more "end" cycles***: at the start a shorter one, at the end a specialized postgraduate one. They become more flexible, with bridges between the streams. They involve technical studies which would have been considered in the past as "not university." On the contrary, sectors of high technical studies are frequently upgraded to the university level.

In order to meet new kinds of expectations produced by the heterogenous mass of students and to stick closer to the reality of life, new interdisciplinary and selfmanaged experiences are made. Another answer, especially to the needs of adults, are new institutions like the ***Empire State University*** or the ***Open University***.

All the "school area" of higher education tends to be planned and integrated as a global system including the university. More flexibility and openness from one sector to the other, easier access and admission, shorter cycles in the university, are changing the structures in a comprehensive, largely optional system.

Power Structures of the Teaching Institutions

Among the papers presented at ICED's 1975 Aspen Seminar, I find the one by Howard R. Bowen on "The Changing Power Structure in American Higher Education"[1] pertinent to this discussion. I only quote the main conclusions: "These changes in the power structure may be summarized as follows: (a) Within each institution, power has been dispersed among students, non-academic staff, and faculty. Up to a point, this has contributed to a sense of community. (b) Power has been transferred to government — local, state, and federal. Colleges and universities have been drawn into the political orbit. (c) Market power over higher education has been intensified, as tuitions and portable student aid have increased, as categorical grants have expanded, and as services rendered for fees have increased. (d) The power of the administration and governing board has been reduced. (e) The inner direction of the institution has been diminished or has been subverted for the ends of the internal parties.

The essential attribute of the president has changed from that of powerful entrepreneur to a leader who leads by means of subtle persuasion and mediation.

A college or university serves society best when it is a community with significant inner-direction and is propelled by academic considerations as to the qualities to be imparted to its students and as to the directions in which knowledge is to be advanced.

1) *Higher Education and the Current Crises.* New York: ICED, 1975, pp. 167–168.

One can think of four concepts of the university:

1. a creature of the state deriving its direction from political considerations;
2. a creature of the market selling whatever services people are willing to pay for;
3. an autonomous self-directed organization financed from unrestricted funds; or
4. some combination of the state-directed, market-directed, and self-directed enterprise.

The obvious conclusion is that some combination is desirable. University communities are not saintly enough to have absolute power. However, in my judgment, American higher education is veering excessively toward fractionated communities and toward state and market control and is losing the vital element of inner-direction based on academic considerations."

This is an excellent view on the evolution in the United States. Therefore, I do not find it necessary to express my personal views.

In Europe, the trends are the same, but the position of elected students and young researchers seems to be, in many cases, more institutionalized and armed with more power — the number of delegates, the statutory intervention capacity — than in the United States.

In France the Edgar Faure law, after 1968, aimed at suppressing the *Central-internal* power of the Faculty by dividing the University into U.E.R., "unites d'enseignement et de recherché" and by decentralizing the management. Managing autonomy was given to the board of the university by the State, formerly the only decision maker. In fact, the new U.E.R. structure has reproduced big sections of the former Faculties and the State, though the budget control remains the central power. But the absolute academic power of the full professors (through the Faculty board) and the absolute administrative power of the State, though both remain strong, are weakened as compared with the situation in the past.

What is striking in the European management of the universities, is, generally speaking, the increased control of the State because of the difficulty in financing the universities properly, the longtime necessary to produce and to apply decisions, the bad and conflicting climate in the boards and committees within the university. Other reasons are the

diffidence of the students and of the young academic and research staff, politicization of the discussions, too conservative positions of many professors, indifference of the students as voters leaving the field to the radicals, and so on.

I guess this kind of climate is different at least in degree, from that in the United States. And what about Japan?

Concluding Remarks

In terms of structure the traditional division into Faculties is virtually condemned or is in transition. The Department system, if founded on *disciplines* — Statistics, Economics, Physics or Microphysics, etc. — avoids the traditional difficulty of faculty votes with incompetent partners, perhaps selling their votes, expecting counterparts to provide other votes, but involves as such, the reverse danger of the corporate-minded body.

In my opinion, the relevant structure has to take into account the trend to self-managed optional studies in place of programs taught to receptive, culturally homogeneous students. And it has to cover simultaneously research and formation, the one feeding the other in the same common team.

In these respects I think that a proposal of Jantsch, an Austrian O.E.C.D. expert, in a rather old report in the sixties delivered at the Massachusetts Institute of Technology, has to be considered as a good basis to adapt the university functions to the actual needs of the "new" students and of society.

The central idea of Jantsch is to divide the joint activities of education and research among "techno-social centers." Each of them should cover a field defined by real problems of knowledge linked with social life. So we would have interdisciplinary teams to help students to self-managed study of the field and to follow, and perhaps to participation, the research program covering the given field. At the start of this approach social sciences, including economics and administration, biological and natural sciences, should be narrowly associated with the exact sciences and technologies relevant to the field. For each period of work the members of the team will fix a program of research and education and the role to be taken by everyone. We might consider in these prospects, centers on Housing, on Transportation, on Mental health, on

Regional ecology, on Child development, on Energy problems, and so on.

This approach will facilitate the "service" function of the University and provide integrated solutions of technologies assuming their social aims and costs as factors really integrated.

But I have something to add to the Jantsch structure. I think it should be necessary to also have, in the university, institutes for basic disciplines and methods. These centers should always assimilate and criticize the most modern and valuable progress in their discipline; they should train specialized scholars in order to provide "members" for the "techno-social centers," temporarily in order to help to solve a problem, definitely as professionalized participants of one of these centers. What kind of institutes? An Institute for Mathematics with a calculation center, computerized of course; an Institute for Opinion Inquiries ready to cooperate with and answer the needs of the techno-social centers; an Institute for Statistics, an Institute for Cybernetics, Systems Analysis and Models, an Institute on Linguistics and Semiotics, an Institute on Psychoanalysis, and more.

A university consisting of "techno-social centers" and "institutes," both dedicated, on the basis of their specific functions, to education and to research, might be a solution for an institution open to the mass without criteria of age. That would mean regular participation of adults in accordance with the principle of "permanent education."

STRAINS IN THE GROWING STRUCTURE

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The University in a Post-industrial Society

It can be said that today many countries are proceeding steadily to the stage of post-industrialism. It is the aspect of what is called knowledge-industry society that matters most in relation to the university in a post-industrial society. Accordingly I shall confine myself here to discussing the main problems and transformations the contemporary universities have to face.

In this stage of development of society, knowledge, especially in high order, namely theory and science, determines the direction of the society to the greatest extent; relevant personnel, organizations, techniques develop rapidly; knowledge grows and is transmitted to all parts of the society; knowledge influences and directs individuals as well as the society; industry and science relevant to knowledge develop. Knowledge-based society is a society which is governed by technology and science, the highest knowledge, on one hand, while it is a society of mass media and mass culture where knowledge is distributed and popularized among the mass on the other. The former is represented by computers and data communication, while the latter is represented by TV and newspapers. The new elite in the knowledge society are scientists and engineers who are bearers of the highest science and technology on one hand, and commentators, TV talents, copy-writers, journalists and columnists who are the heroes of mass media on the other. Behind these brilliant elites, there are executives and owners who run the knowledge industry. Not only those who run the knowledge industry in a limited sense; in a post-industrial society, no enterprise or government can survive unless it decides its will based upon exact knowledge and rich information. Every enterprise will fail soon without R&D, scientific planning, cognizance of future prospects, survey and public relations.

Therefore, all the executives who must collect relevant data upon which decisions must be made are now of the knowledge elite, too.

As knowledge acquires more and greater social influences in these ways, enterprises as well as individuals become more motivated to the acquisition of knowledge. Knowledge industry and communication technology in turn develop more. People living in an intellectually dense society feel uneasy if they do not possess information and knowledge. As relations between individuals and society become closer and as various orders of society depend upon each other to a greater extent, individuals cannot remain aloof from and indifferent to the society. Thus individuals as well as sub-cultures are eager to get knowledge and information, in order to survive and not to be behind the fashion and trend of the society. Thus as production, collection and possession of knowledge become more important, there are more knowledge-relevant activities which accelerate the knowledge. People seek new knowledge and abandon the old. Knowledge soon becomes obsolete, a sort of goods for consumption.

The acquisition and transmission of knowledge, science and technology can be called education in a broad sense. Therefore a post-industrial society, or society of knowledge, is a society where education is developed and expanded unprecedentedly interreleted. In order that knowledge may be accepted and assimilated by the mass, the mass must be equipped with the ability and attitude for it. Thus expansion of education is a ***sine qua non*** for post-industrialism. At the same time, since post-industrialism means, the intellectual upgrading of the mass, it means the expansion of education. Educational industry plays an important role in the knowlegde industry; knowlegde technology is transferred soon into educational technology.

This is the case for education not only in a sense, but also in the narrow sense of school education. Post-industrialism cannot take place in a society where schooling does not develop, and post-industrialism cannot but accompany the development of school education. Higher eductional institutions are established in order to transmit systematic knowledge or science and to foster the attitude and ability to learn it, so that the higher the knowledge a society has, the more sophisticated an education that society needs. The greater the demand for technocrats who are personnel for the knowledge industry, the higher

and professional education which trains them must expand. In recent decades every advanced nation proceeding to post-industrialism has witnessed the phenomenon of an explosion in higher and professional education, now widely open to the mass.

It has been proved and held in many countries, however, that educational explosion means at the same time educational crisis, symbolized by the world-wide student unrest around the year 1970, which accused higher education of following the society too closely on the one hand and of being too remote from the society on the other. The society, too, was not content with the contemporary university. On the campus, between town and gown, open conflicts, sometimes physical and even bloody, took place and universities seemed to lose their authority and trust. While higher education cannot but increase its importance and expand, it does disclose its limitations and lose traditional prestige. The statistical distribution of ability indicates the incompatibility of a quantitative expansion of human resources and the maintenance of their quality. This contradiction becomes clearer especially when the university is oriented to research.

With the shortcomings of school education symbolized by the university crisis as one reason, the idea of life-long integrated education, which was strongly proposed by Unesco, has come into existence in a post-industrial society. Since this stage of society is characterized by rapid growth of knowledge and its importance, it can be called an intellectually-changing society. In an intellectually stagnant, unchanging society, there is no great difficulty if education is confined to youth, as knowledge learned during adolescence may be effective ever afterwards; there is no growth and obsolescence of knowledge. Thus here an upper limit of knowledge to be acquired is determined. The development of school education as the institution to learn systematically this limited sum of knowledge can safely mean the education itself. This is the reason why prior to post-industrialism effort is focused on the development and expansion of school education. Here those who have received the highest school education need not learn after graduation. There exists an idea of completion of education.

Now, in a post-industrial society, the picture is entirely different. While it is quite natural that school education, especially in the university, devoted to tranmission of systematic knowledge grows in importance

and expands, even those who have received the highest education must soon become out-of-date unless they continue learning throughout their life. Those who have higher education are more likely to be an elite in the knowledge society, so that they have more need for knowledge of the higher order. Under these conditions, the idea that school is the only institution of education and education is needed only for youth comes to an end, and instead the idea of life-long education appears. People become aware of various shortcomings and limitations inherent in school education. Before post-industrialism, even if the crisis of school education were recognized, there were few institutions fully devoted to education but schools. School teachers were the only professional teachers, and those who wanted to get higher knowledge systematically had no other way than to go to school. Now, in a post-industrial society, there have appeared a great number of educational institutions other than schools, a number of educational media other than school education, and a number of teachers other than school teachers. In addition, this new type of education is often more effective and attractive than traditional school education. It does not cling to obsolete curricula as do schools, but provides the latest knowledge relevant to individual needs. It is far more flexible, attractive and diverse than school education. The development of the knowledge industry, mass media and adult education is strong enough to challenge the monopolizing status and authority of the school education. This levelling-down, in effect, of school education accounts for the open criticism of it.

Thus school education is confronted with the challenge from the out-of-school education as well as the idea of lifelong learning. Furthermore it is placed in the difficult situation of the society which surrounds it. Three fundamental paradoxes can be mentioned which today's school must meet.

1. ***Emergence of a negative attitude towards education and science.***

As said before, post-industrialism is dominated and led by knowledge in the broadest sense. Post-industrial society is therefore called society of the knowledge industry. Science and technology, ideas and information characterize this society, and hence organizations and technologies which are devoted to the creation, diffusion and transmission of knowledge and to the training and selection of personnel for the

knowledge industry expand and develop to an extreme extent. Therefore post-industrial society is an educative society providing many opportunities for education and learning. Respect for learning, education, knowledge, science, intellect and rationality is a prerequisite for it. The university is an institution of higher learning of the highest knowledge, i.e. science, so that this respect is of utmost importance. However, there develops concomitantly a contempt and antipathy towards knowledge and intellectualism, a disgust and hostility towards learning and science in this age of mass culture. The university as the site of intellectualism is located in a sea of anti-intellectualism.

2. ***Unequal distribution of time for learning.***

Post-industrial society is rich in leisure, which is at once a precondition and a challenge for life-long education. Rich leisure facilitates the attendance of the young to the university, who demand education as a leisure activity. Leisure does not, however, increase equally for everyone. Formerly, the elites were also the leisured classes. They made use of their leisure to enhance their humanistic, liberal education. At that time, the elites were also the cultured classes. But now, in post-industrial societies, the elites must devote themselves to the acquisition of knowledge which is directly related to their own constantly growing and differentiating specialities. They are likely to become ***Fachidioten*** (narrow specialists) with no leisure to acquire a broad culture. Now it is the masses that constitute the leisured and cultured classes. Hence there is the possibility of a revolt of "the cultured masses" against "the uncultured elite." This scene is typically observed in contemporary universities where the elite, professors, are revolted against and questioned by the masses, students who have a broad culture and are taught general culture in the university.

3. ***Imbalance in knowledge.***

Although the post-industrial society is characterized by an abundance of knowledge, all types of knowledge are not equally plentiful. While short-lived knowledge is abundant, knowledge that withstands the test of time is not. While technical, superficial knowledge is abundant, knowledge that answers man's deepest needs is not. Since the creation of knowledge is monopolized by a few, there is much one-way instead of two-way communication. While knowledge of remote places is abundant, that of one's own community is not. These sorts of imbalances

of knowledge result in mutual distrust and frustration among peoples and groups. There is much fragmented but little consistent knowledge so that people cannot choose and judge knowledge adequately. People who have only rich knowledge are deprived of the chance to touch the reality and work. This is the third paradox of post-industrialism which today's education including higher education must face and solve.

Transformation of Function and Structure of University

In post-industrial society, the substantial importance of knowledge of a high order is increasing, and the university, as an institution for collecting, transmitting and producing such knowledge and for training the elite of knowledge, cannot but expand with the growing social role, although it can no longer monopolize authority in the world of knowledge partly because life-long learning becomes necessary owing to the rapid growth and change of knowledge, partly because life-long learning becomes possible owing to the development of powerful institutions and various opportunities other than the university. The university cannot catch up with the ever-changing society since a formal institution is inflexible by nature, and a rapidly expanding university cannot fully fill its expected role owing to such factors as imbalance between quality and quantity, invasion of outer culture into the campus, multiplication of personnel who have neither motivation nor ability for learning, etc. Accordingly the university, confronted with the paradoxes of a post-industrial society, loses its former prestige and authority by attacks from within and without, while it should solve the paradoxes itself. This is a factor which drives universities to reform all over the world.

The ever-growing university population transforms higher education to a greater extent. It is not a mere quantitative but a qualitative transformation. A larger university population means larger enrollment per university because of the following reasons. Science has been so advanced and differentiated that each university cannot do without more professors of ever-diversified disciplines. As the number of qualified teachers, however, is limited, it is necessary realistically that there should be more students per university instead of more universities with the same number of students as before. It is especially the case when the higher institution is not only committed to professional but also

general education, or when the enrollment is so rapidly expanded that there is no time to train enough qualified teachers. Thus, most of the contemporary universities are unprecedentedly gigantic in terms of the quantity of professors, students, facilities and finance, and are far from being yesterday's small community. As a result, there appear three important changes: bureaucratization, massification and dependence upon society.

The university as a huge organization must necessarily be bureaucratized. Formerly science was not so specialized, and professors of the same discipline could understand each other. There was a climate of direct democracy. Bureaucracy necessary for the contemporary large university is characterized by formalism, red-tapism, differentiation of status and role, and hierarchy of power. Bureaucracy of such character is not essentially fit for education which should be based upon personal relations or for research which appreciates freedom. Thus from bureaucracy which is a sort of necessary evil for the growing university there arise conflicts between departments and university, faculty and administration, and teachers and students leading to irritation, distrust and antagonism for all persons concerned.

As enrollment is expanded, a vast variety of students appear in terms of wish, interests, ability and values. In contrast with elite higher education as the privilege for the chosen few, and to mass higher education, as the right for all who wish to attend, universal higher education as Prof. M. Trow named, where attendance becomes the duty for involuntary students, cannot satisfy all students of such variety. Higher educational institutions must be diversified into research-centered, education-centred, sports-centred and even recreation-centered ones.

Accordingly the larger enrollment brings with it more students dissatisfied with or unadjusted to the university, together with its lowered quality. While science, which the university offers and seeks, is more advanced, the distribution of intellectual ability is restricted biologically, so that the university must lower its standard in order to make students adjustable. A growing number of students as well as professors lose the scarcity value, the high status, and the high esteem they used to enjoy.

The larger enrollment is followed by secularization of the university and an intrusion of mass culture into campus. Nowadays students

and to a lesser extent professors are no longer an actual or future elite. The more the students, the more a representative sample of the general population they become. They are baptized by prevailing mass culture, just as general youths. Students who are familiar with mass culture bring it with them into campus. As mass culture is quite different from academic culture, the university makes itself the place of mass culture in order to satisfy the students, or continues to resist mass culture in order to keep the academic standard.

The increasing students are no longer different from the general young population, and their social status and prestige is lowered owing to the loss of the scarcity value and the select quality. Now there are more students from lower classes, and their scholarship is smaller than the salary their working friends receive. Although elite positions are more and more monopolized by university graduates, more and more must enter into the blue-collar class or even suffer from unemployment. Their social status is lowered when compared with yesterday's counterparts or with today's young workers. Prolonged attendance means prolonged dependence, and they are not treated as full-fledged adults. These situations are responsible for the increased discontentment among students.

Moreover, the expansion of higher education is accompanied by its increasing dependence upon society. Since students are a dependent population and more money is needed for education and research, the university depends upon society more and more. In order that it may get more support from outside, it must meet the social demands and serve the society. Thus the university, far from being an ivory tower, is threatened by the loss of autonomy and freedom. The conflict between the university and society grows if it is to defend independence and freedom, and the conflict between the university and its faculty or students grows if it is to also adjust itself to the society. In any case, the time is over when higher education and higher learning were monopolized by higher institutions. Now research institutes and educational industry outside the campus are sometimes carrying out the more adequate and fresher research and education. Criticism and attack of the university which is losing its mere monopolization of authority are likely to occur.

The above is in regard to the transformation of the university

in response to the social change which demands the expansion of higher education. Another aspect of social change which influences the university can be mentioned, namely, development of science. Science used to be a system, and scholars could have a general view over it. Philosophy, the science of sciences, was proud of its status as the king of all disciplines. Now science is specialized and differentiated to an almost limitless extent. Even scientists in the same discipline can neither be acquainted with all the achievements of their colleagues nor understand each other. When there is only a handful of specialists in a particular field, the academic community is a mere nominal term. The greatest reason for academic autonomy and freedom is that evaluation of ability and achievement of a scientist can be made only by specialists in the same field. But as science is more diversified, and there are fewer specialists in each speciality, the above reason becomes senseless. Thus D. J. Price predicts that scientists henceforth will depend upon personal communication once again as in the remote past and that invisible college will be of more importance.

In addition to this diversification, the development of science brings with it the emergence of interdisciplinary fields. Too much specialization results in ignorance of the general outlook, which leads to the recognition of the need for joint research or to the discovery of new areas of study. Then, international cooperation becomes popular. Interdisciplinary and international cooperation requires not only contributions through specialization of scientists, but also requires the role and ability of scientists to cooperate with colleagues in different fields and nations, to organize them, to lead the project, and to obtain enough support from society, some of which used to be foreign to the scientists and to be even the object of their contempt. Contemporary lead ing scientists must be like clever businessmen.

This is not the whole story. Not only the so-called big science, but also almost every science cannot do without a vast number of co-researchers and a huge sum of money for development of facilities, employment of comput ers and the like. In order to secure them, scientists must have the ability to publicize the importance and utility of their study and its achievement. Research which responds to the social need instead of the logic of science is more likely to be appreciated and supported by the sponsoring society. Therefore applied science, research

on a practical problem and physical science are of more advantage than basic science, classical study and humanities. Useful science is evaluated while basic science suffers from the shortage of successors. This problem is serious especially for the university, the most appropriate base for basic science. It reflects the secularization of the university, science and scientists, and it means the loss of academic autonomy and freedom. Moreover, secularized professors with the ability to administer the huge organization but with little ability or understanding for science are evaluated and direct the university.

Thus the closer relationship between science and society, the differentiation of science, the development of big science etc. are responsible for the secularization of professors. In addition, the more important the political ideology in society, the more political-minded the professors. It is widely known that a vast number of radical students act as *avant-garde* of political movements and have a profound effect upon society, but politicization is not confined to the students. When the role of ideology is great internally as well as internationally, scholars who have the ability to make systematic theory, it is quite natural for political powers to make the fullest use of this ability. It is physical science that has invented technology which has in turn produced various kinds of social evils like pollution, and social and political responsibility of natural scientists is in the acute dispute. Social scientists by definition are concerned with social and political issues. They cannot but be politically conscious. While professors as elite used to defend the status quo, contemporary colleagues are likely to have sympathy with counter-ideology.

While post-industrial society has profound effects upon the function and structure of university as seen above, higher education conditions the society in turn. It selects, trains and allocates the man power required by society, and it transmits and creates science and technology, thus promoting social change. In newly independent nations or post-revolutionary nations, universities play an important role in formulating the national ideology and in training the national leaders and technocrats. But what is remarkable about social function of higher education in the changing society is a kind of tension it produces. The university becomes a source of social tension, owing to the dissatisfaction which it produces in and outside the campus, and which its components have

towards the society. A typical example is the student movement, which shows in a sense that the university leads and directs the social and political change. When rapidly expanding higher education produces more graduates than the job market can absorb, the great number of jobless intellectuals is a source of profound social unrest. When higher education is not fully expanded to accept the growing number of candidates, struggle for entrance into universities becomes serious, also giving rise to social strain related to education.

IV

TOWARD A FUTURE SYSTEM OF HIGHER EDUCATION

—Summary of Discussions—

TOWARD A FUTURE SYSTEM OF HIGHER EDUCATION
—Summary of Discussions—

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1. New Frontiers of Higher Education

The introductory session's opening lectures on *Higher Education in Transition* were given by Dr.Kerr and Dr.Tsuru. Both of these reports had relevance to the meaning of human capital and social demand thesis, emphasizing a reliance upon the potential human capability and higher education's role as a heuristic means for the implementation of human attainment. Both also agreed that the future direction of higher education should not be dictated by market demand, but rather, should be better able to respond to social needs.

The "invisible hand" is not working according to Dr. Tsuru. Massification is everywhere. Students are not getting salable skills, or at least don't think they are. They may be getting the social status which brings them into higher education, but it somehow goes sour if they can't sell the resulting status for employment. Professors tend to teach means and not ends. Universities are often not on the frontiers of progress. The multi-purpose cafeteria-style organizations that we still call universities are too busy being relevant and are therefore not transferring enough of the wisdom of the past to the future. Ethics are not taught enough, and certainly, those of us who have lived through our own Watergates or Lockheeds or whatever are embarrassingly aware of what an advanced stage of education those who we now criticize reached before they went on to do whatever they did in society. Maybe, as Dr. Tsuru quoted Keynes, "foul is still too useful and fair, not useful enough."

And the universities seem to be not answering the questions that concern us — the question of what to do with the affluence, and in developing countries, the question of how to develop without the damage that development in the more developed countries seems to have produced.

Finally, Dr. Kerr, with a remarkable synthesis of the whole situation, called our attention to a list of what he termed "functions unlimited", which almost seems to describe this new mass education in contrast to the more limited functions of the traditional universities which have not been changing as much as society. It is not clear if there was, in a later discussion, a full consensus as to whether that was a bad or a good thing. But certainly, it is a consensus statement, if there was any consensus statement, out of this two-day meeting.

Discussion on Higher Education in Transition

Dr. Puey Ungphakon, the President of Thailand's Thammasat University, pointed out that the developing countries were now just reaching the first series of the reproduction functions described by Dr. Kerr, but at the same time, social forces — students and faculty — were forcing the second transformation series upon them, thus resulting in a more complex and difficult situation than that of the advanced nations.

Dr. Kwapong, Vice President of the United Nations University and former president of Ghana University, pointed out that the functions of the university in the developing world are wider and more significant than in other nations, especially since it plays an important role in the formation of public opinion.

The President of the U.N. University, Dr. Hester, fundamentally endorsed the position of Mr. Kwapong, adding that the U.N. University's purpose is to create effective connections among institutions in order to reinforce the work that scholars are doing around the world on the big questions about value and social reality and the future of civilization — problems that are common among nations and are larger than the capacities of individual nations to solve. The U.N. University is hopefully to provide the stimuli to help universities in formulating new functions of a multi-disciplinary nature that will enable them to cope more effectively with such problems.

Dr. Eurich, President of the Academy for Educational Develoment, referred to the history of education in America in order to illustrate that major change in colleges and universities is in response to social needs. The first type of institution, the liberal arts college, provided a general education for people going into such professions as ministry, law or medicine. However, in the middle of the 19th century, the agricultural and mechanical arts colleges were set up in response to the needs of farmers who then amounted to 80% of the population. In the third step, teachers' colleges were established in order to meet the increased demand for teachers in the latter part of the century. Institutions such as MIT were set up that focussed on the need for scientific development. In the present century, junior colleges were established that functioned to provide vocational skills and also to provide a transition education from secondary schools to the upper divisions of a university. As the number of high school graduates increased, the junior or community colleges met another major social need, namely, that of a way-station for students who couldn't enter the universities. Thus, new institutions which could meet various social demands came into being rather than the reform of already existing institutions. Dr. Eurich concluded that a major obligation of a new institution such as the U.N. University is to lead universities from what they have been, and are, to what they should be.

Dr. Husén, Professor of University of Stockholm, pointed out the interesting paradox that universities tend to be extremely conservative, and yet on the other hand they are hotbeds for all the radicalism that has penetrated politics and social philosophy in our world. This can be explained to some extent by the kind of autonomy the universities have had. (Society has allowed the university to be, so to speak, commissioned to fulfil the critical function in society.) Dr. Husén expressed concern, however, about universities being too much enmeshed in current social policy because universities are the only institution in society where basic research is carried out. Thus, there will be a tension between the role the university has to play in terms of furthering the frontiers of knowledge and its role in helping to solve actural social problems.

Dr. Janne, President of Collége Scientifique, Institute Sociologie Université Libre de Bruxelles, remarked that, in order to understand

the problem more accurately, we have to consider the university not as a total unit but as a kind of mosaic education with very different parts, and we have to build up a sociology of this institution and analyze the roles that these different parts play. In the same university there are two inconsistent and contradictory solutions to the problems being discussed. In one sector you create more liberal, less specialized studies, and in another you will create at the same moment more vocational-aimed departments and teaching programs. This is proof that the university is no longer one unity, but should be considered as a kind of federalized moving institution.

Dr. Nishida, Adviser for Higher Education of Ministry of Education, Science and Culture, remarked that at this time of quantitative expansion we must pay due regard to the issue of quality in higher education, and if students are adequately motivated or not, issues that were dealt with in the following sessions.

Higher Education—Where do we go from here?

So, the issue that we were left with from the opening barrage was who gives the sense of direction. If the universities are not, because of massification and the deterioration of so many of their previous purposes and ways of doing things, or at least the changes in them, are not on the frontier of progress, who is and who ought to be?

A dissatisfaction was suggested with the degree to which universities were applying themselves to the issues of development. Perhaps they meant that the universities weren't applying themselves enough to the production and supply side of the education. Or perhaps, the problem may be that there hasn't been enough attention to the requirement side of the equation and development.

But the basic issue is the same, i.e. how are universities to meet social needs, educate everybody they are supposed to educate in the diversified requirements that the students themselves feel, and still preserve a research function that is truly, as Dr. Husén called it, a "function of social criticisms."

Dr. Kwapong suggested that values are central to this future of education, but what values? The less developed countries tend to say that values are development. The problem is still, how are we going to

develop universities that focus on values more than they are presently doing and still leave room for a marketplace of valuable ideas that call into question the concepts generally accepted in the industrial countries; that energy is cheap or that growth is forever or that more growth is better.

2. Access

In the first session, Dr. Husen and Dr. Amagi reported on the theme of access to higher education. Both speakers were particularly concerned with access/admission, arriving at similar conclusions that the greatly increased enrollment and the new concept of lifelong or recurrent education have significantly affected the relationship between secondary and higher education. Broadened access calls for a new, more flexible admission policy. Due to the fundamentally different objectives of the massified and occupationally oriented courses on the one hand and the essentially more selective research oriented programs on the other, it was questioned whether or not such a system can be accommodated within the structure of the traditional university.

Discussions on Access

A point that drew the most discussion from the floor was the question of how to evaluate the motivation of students seeking higher education. Here, Dr. Amagi's argument of the relation between access and employment was relevant. Namely, that universities have a tendency of passing the buck to the company people who are recruiting, and the total social reliance upon the companies and students, and parents' total reliance upon the social structure to determine what would the university students' advantage be for entrance to society after graduation. The motivation question, particularly that of Japan, was discussed by Dr. Amagi in relation to this social recruitment practices.

Dr. Janne observed that motivation is very much influenced by whatever the system is restrictive or not, and if the system is a restrictive one, the motivation will be based on examination and thus motivation will be influenced by thinking about the means to go further, but not

by the choice of the ends. Dr. Janne said that real motivation must be based on the ends, which is possible only in an open, non-competitive system.

Dr. Pittau, President of Sophia University commented that it is almost impossible to learn by examination what the individual characteristics of a student might be. Looking at the case of Japanese university examination system, the only thing that is examined today is what was studied in high school. Students are asked to just reproduce what they have learned in secondary education, so very little depends on the power of dealing analytically with subject matters. In regard to motivation, there are really no alternative competing interest since practically all the ways to social status and even personal development are restricted to higher education, and mainly to education in some determined university.

Dr. Terasaki, Professor of Rikkyo University, noted that if we were to consider higher education as the institution for post-secondary education so that all youths have an inherent right of access, we would have to take another look at the relationship between access and admission. Rather than a nationwide entrance examination, we should evaluate students in terms of the qualifications of successfully completing a secondary school education. Thus, secondary school teachers should become involved in the process of admission.

Dr. Husén commented that in a system where the common call of specific competences acquired in the secondary system has become so diversified, one has to identify certain skills as a necessary prerequisite for all students entering some kind of higher education. Counseling becomes increasingly important, counseling that not only tries to assess the competencies of the applicant, but also tries to influence them in order to see to it that wrong decisions are avoided.

In looking at motivation that is assessed by seeing to what extent competing interests are sacrificed, Dr. Husén said that he had in mind adults within the framework of recurrent education who would have to sacrifice a bit of their standard of living in order to improve themselves.

Dr. Pignatelli, Professor of the University of Rome, brought up the point that it might be better for students to enter higher education at the age of 25 or 26, after a compulsory working period when, of course, motivations are certainly more clear.

Dr. Nakayama, Professor of the University of Tokyo, commented that, for Japan, the concept of recurrent education is nearly impossible to implement because of the life-long employment system. The enterprises would have to be cooperative in changing this system in order to introduce recurrent education into the university system, thus changing the job market.

Dr. Iijima, President of Hiroshima University argued that the question of motivation could not be used as a screening standard for access to higher education, but rather that motivation giving should be a function of the university education. Using the Japanese situation to illustrate this, Dr. Iijima said that students are lacking true information although they do receive a tremendous amount of information concerning the content of higher education and also other relevant scientific information.

Comments by representatives of the developing nations on the questions of motivation and access

Relating to this question of motivation, contributions from developing country representatives were of significance. Dr. Ocampo from Columbia observed that, because in the developing countries there is a very strong motivation for higher education, the university educated population is increasing rapidly. In fact, the provision of the opportunity for higher education seems to be a more significant question than the examination of motivation.

Dr. Puey of Thailand brought up the point that some students' motivation to receive higher education is based upon a wrong kind of goal orientation and that students tend to choose a course of study without really recognizing their true interests. For example, they tend to choose to go into the medical or engineering or accounting departments simply in order to get a highly paid job after graduation. Although Dr. Puey drew his example from Thailand, in fact, this kind of negligence of the reality of motivation is a very serious problem for Japan, also.

Dr. Samii, Minister of Science and Higher Education of Iran was more or less dubious discussing this question from a universalistic point of view. He commented on the need to consider matters from the unique cultural, economic and political needs of each country.

Dr. Pifer, President of the Carnegie Foundation, concluded this first session rather nicely by summarizing the whole issue of the need for diversification of higher education, and discussed how such diversification could be realized without discriminating against the elite institutions.

3. Structure

The second session's reports, presented by Dr. Shimbori and Dr. Janne, while taking different approaches to the subject of structure, shared similar points of view.

Dr. Shimbori made a sociological analysis on the structure of higher education, examining the various sociological and scientific factors related to higher education and how these factors exerted influence on higher education. Dr. Shimbori observed that the traditional trust in the universities has now fallen down due to post-industrial social changes which have caused the bureaucratization of university administration, massification of the campus, secularization of faculties and degradation of quality.

Dr. Janne looked into the structure of higher education itself, and discussed various problems related to the structure therewith. He also discussed the internal matter of the university in terms of power structure as well as the power relationship between the universities and the society, and clarified how these relationships influence the structure of the universities.

The Chairman of this session, Dr. Kobayashi of Kyoto University, nicely summarized the reports and brought out the following issues for discussion: namely, the achievement of a more globally integrated higher education, the integration between research and education, and the relationship between higher education and society, especially as it concerns academic freedom.

Discussions on Structure

Dr. Narita of the National Institute for Educational Research raised a point of particular relevance. After summarizing the situation in Japan, he came to the conclusion that the diffusion of secondary

education in Japan has already reached a kind of completion as far as the making of new types of institutions, but that the problem lies in the integration among those types. Dr. Narita's opinion was similar to Dr. Amagi's in that the fundamental need was to establish transferability among the new types and more or less establish equality of status among the various new types of educational institutions.

Another interesting observation came from Dr. Nishida who has been responsible for the establishment of the University of the Air in Japan. In considering how to revise the system of higher education, Dr. Ross, Professor of the University of Lancaster, commented that the development of different forms of secondary education is needed to meet the different needs and that this is a way of ensuring that the universities will not be stretched beyond the point where they begin to lose that which they stand for. Resesarch and teaching go together if that teaching is of the highest level. Thus, according to Dr. Ross, schemes to bring the research function outside the universities are movements in the wrong direction. He also observed that other forms of post-secondary education may become unduly warped and twisted if brought inside the common understanding of the university. Activities aimed at teaching more practical skills deserve more importance than to be regarded as merely second and third role activities in institutions primarily directed elsewhere. We need many more opportunities for more people of all ages, but we need different opportunities within different institutions of different kinds focused on different ends. Dr. Ross pointed out that the problem of sixties was a simple one of expansion. In the seventies it has been one of diversifying within those institutions. In the eighties, he expressed his hope that we shall focus on the problem of diversification between institutions with the development of specializations within them, and amongst those specializations, most important of all is that of the university specialization so that we can pass on the best of the valuable tradition of which we are the inheritors.

In this direction, Dr. Idako, Professor of the University of Tsukuba, emphasized that we should not forget that there is a very important system of higher education outside the university. As society grows and has the ability to provide more funds for higher education, the freedom of the academic circle becomes thwarted. This freedom can

be protected in cooperation with the system of higher education outside the universities such as corporation training schools.

Dr. Kwapong expressed the opinion that we should not be overly worried about the university becoming more dependent on society as it becomes more responsible to that society or community where it is located. This interchange between university and society is, according to Dr. Kwapong, where the real function of the university lies. Service, just like research, is an important function not only in the developing countries where there is of course the pressing need for developing those societies, but also in the post-industrialized countries in order to critically see what that society needs. He also stressed the importance of an interdisciplinary or multi-disciplinary approach.

Dr. Husén remarked that interdisciplinary study means a concerted effort on the part of representatives of various disciplines to solve a particular type problem. There is a serious danger of the university becoming overly project-oriented and thus losing its traditional attractivity for top scholars in its promotion of basic disciplinary knowledge.

Dr. Kerr suggested another approach to knowledge which is to organize knowledge and teaching, in particular, and to some extent research around modes of thought or ways of knowing. The way we traditionally organize thought by discipline, method, or problem leads to greater and greater fractionalization. In trying to train minds for use of self and society, there ought to be a place within higher education for broad approaches, an approach by overall mode of thought.

Dr. Pittau suggested that the difficulty for academic cooperation in Japan is caused because we have accepted only one model of the university. Unless there is another case already existing, it is quite difficult to start something new. Universities are now organized into faculties and departments which have sometimes ceased to cooperate with other departments and other universities. Also, many universities recruit their faculty from their own graduates and try to perpetuate themselves by some kind of inbreeding. Another obstacle to this cooperation in Japan is the poor financial situation of private universities which must rely primarily on the tuition of their students. Thus, the private universities do not have the funds to participate in basic cooperative research.

Dr. Nishida emphasized that the fundamental criterion should be

whether or not the students are satisfied. He concluded that in the present situation, students are suffering from a feeling of social segregation and negative motivation. Without a positive motivation and without participating in society, students cannot really accomplish their full potential as students.

Within this discussion framework, Dr. Murai, the President of Waseda University, and Dr. Ushiogi from Nagoya University raised the currently significant issue of public and private sectors. This is a particularly relevant issue because of the massification of the private sector, whereas the same is true in the U.S. in the public sector. It seems that it would be valuable to somehow analyze this very rapid massification process after World War II. The massification that had taken place by the private sector in Japan was followed by the watering down of education. In the U.S., on the other hand, massification was realized by adding a heavy burden to the taxpayers, and also, as Dr. Pifer already suggested, at the expense of research.

Dr. Ushiogi discussed why the autonomy of the university vis-a-vis the government is declining and expressed the need for creating a new relationship between the universities and the authority of the government. How should resources be allocated and especially, should more governmental aid be directly channeled to private universities? Dr. Ushiogi suggests that a viable alternative to direct institutional aid is the more indirect way of subsidizing the private sector by giving more scholarship aid to students who have the option of using it for any institution of their choice, either public or private.

It is interesting to note that the idea of academic freedom or autonomy in Japan is usually referring to the academic freedom of the professors, a situation that has a very close relationship to student dissidence.

Autonomy is often earned at great financial expense to the students. Students in the private sector are sometimes paying a tuition fee of about 10 to 20 times that of those in the public sector. This question of autonomy cannot be considered without some reference to the financial expense to students and parents.

Dr. Maeda, Managing Directer of the International House of Japan, commented that it is very good to have massification of the universities as long as the education of an intellectual elite is not over-

looked. However, in the Japanese system, he observed the danger of neglecting the very important part of liberal education where you must have individual intercourse. In particular, he pointed out that in most Japanese universtities, a student must choose his career at the age of 18.

Mr. Linowitz from U. S. A. especially expressed concern that society's expectation of higher education may be higher than that of the educators themselves, and warned of the danger of the universities lowering standards of admission and graduation and of assuming tasks that should be carried out by other institutions. Dr. Sumeragi, Professor Emeritus of Hiroshima University, said that he saw a promising future in the research branch of the university, although there was a crisis in the educational branch. Dr. Sumeragi expressed the need for education to help society to absorb their research, and this bridge must be extended by the humanities education.

Dr. Samii expressed the view that political, economic and cultural differences are so great among various countries that naturally each country will arrive at different solutions to the problem or question of diversification in higher education.

Some conclusions regarding access and structure

To summarize the discussion of access and structure, it seems that no matter where you start talking about the subject of the future of education, you end up talking about all of it at once, and consequently, the categories used to analyze the situation are not really very useful.

All of the reports, and particulary the comments on them, tended to move toward talking about the whole problem: the whole education problem, the relationship between higher education and the elementary or secondary and vocational categories, the many functions that the universities now perform, even to provide, to borrow the phrase of Dr. Tsuru, "a leisure industry for students", the meeting of both social and individual needs at the same time.

And it was necessary to discuss not only how the university is governed but how the university is influenced from the outside by supporters, controllers, absorbers of the university's manpower product, and by the various categories of insiders who have managed to take away

functions from what used to be clearly the function of the governing board or, the faculty or the central administrators.

It was also necessary to discuss, whether it began with access or with structure, the whole spectrum from the massified access, on the one side, to the highly differentiated employment prospects coming out the other end. The universities as institutions have surely lost a good deal of control over both the access—who gets in—and the employment side what do they do when they get out—, and are now in the process of losing control even over what happens inside the university while the students are there. Dr. Husén put this very well in saying that in comparison with the historical functions of the universities, humanities were no longer enough, and he suggested a series of functions—communications, the imparting of study skills and the motivation to pursue studies as the key to access. What we tend to measure on the access side is aptitude to succeed in school rather than to succeed in life, and maybe that is not good enough.

One very central issue which was approached and drawn away from many times in the course of this seminar is that of interdisciplinary subject matter. In Dr. Janne's report, he mentioned the possibility of dividing research and training by techno-social fields and making a new collection of disciplinary categories. Dr. Kerr suggested that we reject the disciplinary, the methodological and the problem-solving or subject matter categories in favor of modes of thought on the ground that all the others fractionalized the problems we deal with.

The problem in the universities is to impart the skill to use varying modes of thought, i.e. the skill to bring experts and expertise together to make something different happen, not only in national terms but also in a global sense of international interdependence. We must develop a new core that is not only concerned with research on the frontiers, but a core that is based on the assumption that every citizen of a modern society has to have some skill in looking at the situation as a whole.

4. Conclusion

In the discussions that followed, Dr. Le Bris from France observed that in order to consider the future of higher education, we must first

consider the present situation which he summed up in three points, i.e. the explosion of knowledge, the explosion in the number of students, and the diversification in the student population. He observed that higher education has increasingly become a political concern because universities absorb an increasing amount of the national budget. Using France as an example, he pointed out that nearly 4% of the national budget is used to finance higher education. He also noted the greater diversification of students in terms of both social class and age. Thus, in view of these factors, he emphasized that the functions of higher education have to be reevaluated before thinking of new structures, and emphasized the importance of promoting adaptibility to society.

Next, Dr. Ogata from Hosei University discussed the wide gap within the educational pyramid between the private and national universities in Japan, where national universities enjoy a research and personnel budget three times more than that of private universities. According to Dr. Ogata, the source of the problem is in the dependence of education on the economy, and that the university has been relying too much on the function of selecting elites to the deterrent of its other equally important functions of serving a broader segment of society.

Dr. Hochleitner of Spain urged that we recover the sense of purpose in higher education towards an improved international order not only among students and professors, but also within the society at large. He also noted that we should not overemphasize the links between higher education and both elementary and secondary educaiton where many answers to the problems of higher education may lie.

Dr. Janne expressed the opinion that there really is no discrepancy between growing equality and growing quality because equality provides a larger basis for selection – the pool of talents is larger.

Dr. Shimbori spoke about structure in regard to the Japanese situation in which he saw the need to resolve the problem of diversification and stratification. In Japan, there is a strong hierarchy in the kinds of education and kinds of schools, with each institution striving to reach a higher level. Thus, he questioned the idea of further diversification as an objective for higher education, and also questioned whether more flexible access between different hierarchical levels of higher education is feasible in Japan's situation because of the tensions that would be created.

Dr. Krogh of Geogetown University commented on the legislative treatment of higher education which often brought about unnecessary problems due to ignorance and bureaucratic stiffness, and he stressed that it may not be possible to improve our institutions of higher learning when governments force upon these institutions the responsibility for solving problems whose origins and manifestations do not lie in the university.

Dr. Eurich remarked that members of the seminar may have an erroneous impression of higher education in the U.S., namely that an excellent case can be made to show that the quality of higher education in the U.S. has not deteriorated as it has been massified. And, he said that our problem today is not mass education but rather the lack of clarity about what higher education should do.

Dr. Coombs, the Vice Chairman of ICED, made a general observation that throughout this seminar there had been the tendency to define education as particular institutional forms rather than defining education as the processes by which people learn. One conclusion of the Unesco Commission for the Advancement of Education had been that society's total learning through the formal school system is decreasing, and thus, one of the major functions of the formal system of higher education is to equip people with both the skills and the motivation to enable them to learn from other sources. Dr. Coombs also made two significant research suggestions. First, that universities examine the performance of their graduates to see if there is any correlation beween their university and secondary school performance and their degree of success in the outside world. Secondly, he suggested that educational researchers focus more attention on the various forms of higher education that go on outside the formal structures, and try to devise way of coordinating their own efforts to tie in more productively with these informal kinds of learning. He pointed out that in the U.S. at least the same amount of money is spent by the government, corporations, etc. on higher education outside the universities as the total budgets of universities.

Commenting on the importance of the value system within the system of natural sciences, Dr. Imahori of Hiroshima University said that the university should exert its greatest effort for world peace. Today, we have to consider the question of how we could best apply or absorb this value system within the various disciplines and within

universities.

In his concluding remarks, Dr. Perkins, chairman of the ICED, stressed that the 20th century has been a time where two dynamos of growth have been at work on society. Dr. Kerr, using Plato's term, referred to the first of these, the "wheels of education", which means that once started, education continues to grow on itself just like the interaction of science in the industrial revolution. The impression one receives from the thoughts expressed during this seminar is that modern society has moved from one of being a perpetual motion machine to one of perpetual growth, and this growth inevitably leads to specialization, both in biological groups and in social groupings.

During the course of this seminar, it has become increasingly obvious that specialization, which is the consequence of our growth, is now leading to demands for new coordination and new generalizations. For example, with respect to the content of higher education, we have heard from many speakers evidences of ways in which we are trying to integrate studies that we feel are now dangerously fragmented. Another mode in which generalization is now representing a swing away from specialization is in the structure, namely in the move from individual institutions to systems of institutions, from autonomy to problems of coordination and national planning.

To summarize what was covered with respect to content and in terms of description of the structures needed to carry out a more integrated content, Dr. Perkins mentioned seven policy areas that are under pressure to shift to greater specialization and thus, to greater coordination and generalization.

The first policy issue brought up is one of how to combine the need for quality in education with the demand for more egalitarian access.

Another policy issue is how to maintain in an institutional network universities where teaching and research, particularly at the graduate level, are closely identified with each other but at the same time permit the development of a variety of institutions where teaching is the main emphasis, such as the growth of junior colleges in the U.S., with stimulation provided by inter-connections with the universities.

A third issue is the modification of the idea of autonomy in favor of public accountability.

Fourthly, we have a basic policy shift from prescribing what a

student must take to allowing him more choice in determining his course of study.

Fifth is the shift from notions of hierarchy of ablility based on either social background or other advantage to notions of equality of opportunity. Dr. Perkins noted that this must take different forms in different societies, but the purpose and the objectives are the same.

As a sixth policy issue, he mentioned the changing relationship between the universities and higher education as a center for scholarship alone to one in which scholarship is put to use for society.

Finally, Dr. Perkins strongly stressed the need for institutions of higher education to modify what have been primarily national purposes to those of regional and international scope.

Dr. Perkins concluded by expressing the encouragement he felt throughout this seminar at the positive attitude of its members towards handling the enormous problems facing educators today—the attitude that we live in a time when large problems actually do have some chance of solution.

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1. RECOMMENDATIONS OF THE AD HOC COMMITTEE FOR THE STUDY OF HIGHER EDUCATION IN JAPAN

(Distributed by Dr. Isao Amagi)

A. On the Expansion and Improvement of Higher Education (March, 1975)

1. The need for the expansion of opportunities for higher education has been growing and it is expected that it will grow more in the future.

Considering the trends in ratios of higher education entrants to the 18 year olds by prefecture (the highest ratio is 50%; the lowest is 14%; the yearly national average rate of growth for these five years is 2.4%) and social developments in the future, we are of opinion that we should take, as soon as possible, necessary measures such as planning and coordination of policies for the expansion of higher educational institutions, so that the demands for higher education might be met by these institutions at the beginning of 1985 when the ratio will be at least 10% higher than the present 28%.

2. It is necessary to prevent higher educational institutions from concentrating in big cities, and therefore, to promote in local areas the expansion of higher educational institutions as well as the establishment of new academic towns.

In this respect, we think it necessary to take suitable measures including the planning of new types of higher education institutions, with an objective in view to improve the regional difference and unevenness in educational conditions such as enrollment ratio, capacity, the distribution of students by field of study, etc.

To this effect, we also think it needed to amend the procedures for the approval of the foundation of institutions, and at the same time to take effective measures to maintain the standards of the approved institutions.

3. In order to promote the positive expansion of higher education institutions in local areas, the important roles should be played by national and public institutions, especially by public ones, and necessary measures should be taken to give aids to private institutions.

As for junior colleges and other institutions of higher education, considerable expansion is also needed in terms of women's education and vocational education.

4. Concerning graduate schools, it is necessary to make expansion

in a large scale in order to cope adequately with needs such as the training of teaching staff for higher educational institutions, training of researchers, the refresher training of people at work, etc.

5. In the light of the fact that the private sector of institutions occupies a very important place in a Japanese higher education system new policies should be taken to improve and strengthen aids to private institutions, so that future standards of higher education as a whole could be raised and financial burden of students in private institutions would be lightened.

In this respect, we think that we should work out a general policy of aids to private institutions as well as flexible way of aids in accordance with the circumstances of individual institutions and the measures of financial assistance to students.

B. Proposals for Comprehensive Planning in Higher Education (March 15, 1976)

1. In Japan, higher education has expanded rapidly in recent years, bringing the enrollment ratio at this level of education to among the highest in the world. However, as this rapid expansion took place without a comprehensive planning it deserved, various problems and distortion have arisen regarding qualitative aspects such as imbalance in regional distribution of institutions of higher education and in numbers of students in different fields of study.

2. Since 1972, the Ad Hoc Study Committee for Higher Education has been considering guidelines for a long-term plan for the development and improvement of higher education, looking especially for most appropriate ways and means to cope with the above-mentioned situation, and has published every year the results of its consideration. In 1975, on the basis of these results of study and taking into account the future socio-economic conditions and possible changes in other educational systems related to higher education, the Committee especially examined a planned reorganization of higher education in Japan.

3. In preparing a comprehensive plan for the development and improvement of higher education, due consideration should be given to both quantitative and qualitative aspects, e.g., the wide spread of higher education and the maintaining of high academic standard. In this respect, a number of important and inter-related problems such as the relationship between higher education and upper secondary education, selection of entrants to higher educational institutions, the future careers of the graduates from these institutions, the expansion and improvement of graduate schools to raise the academic standard, financial assistance to the private in-

stitutions by the State, the sharing of the cost of higher education among those concerned, should be considered in a comprehensive manner, and appropriate measures should be taken for each of these problems. Taking into account the views of other advisory bodies on these problems, the Committee endeavoured to establish guidelines for a comprehensive planning of higher education.

4. With 1986 set as the target year, the Committee formulated a comprehensive two-stage plan, the first stage being 1976–80 and the second 1981–86. For the first stage, the Committee set forth both the direction and content of a comprehensive plan mainly in terms of the quantitative development. In this regard, in view of the fact that more than half of the 18-year-old population continue into some form of post-secondary education, special training colleges included, the Committee considered not only universities but also the University of the Air, education by correspondence and special training colleges. In addition, it considered the changing situtation in which higher education finds itself, shifts in the 18-year-old population and measures to control expansion in private universities during the next five years which in conjunction with Law Concerning Financial Support for Private School Promotion should help to improve the overall quality of private universities.

5. With a view to laying the basis for the future development of higher education, the Committee gave special attention to the qualitative improvement during the first stage of the plan. It pointed out the necessity of securing the structural flexibility and mobility of the entire higher education system. In regard to universities and junior colleges, it stressed the need to restrain their concentration to large cities, and to approve the expansion only when it contributes to the correcting of imbalance mentioned in paragraph 1, or to training of manpower under the long-term, well planned scheme.

Consequently in regard to public institutions, the Committee sought to suggest appropriate ways and direction to develop concrete plans for the future, in regard to private institutions it pointed out conditions which must be considered as directions for improving quality such as correctives for exceeding the established quotas on student entrants, and also the criteria for the establishment of new universities.

6. For the second half of the plan, the Committee will conduct an investigation, at some appropriate time in the future, which will consider a number of things, including the developments in the first half, changes in social and economic conditions, and the movement of people and social demands toward higher education.

7. It is hoped that appropriate measures will be taken along the lines we have suggested which will lead to more expanded planning among

higher educational institutions and related systems and which will thereby lead to the realization of the suggestions we have offered.

2. CURRENT MUTATIONS IN UNDERGRADUATE EDUCATION IN THE UNITED STATES

(Distributed by Dr. Clark Kerr)

1. ***Programs for new or nontraditional students***

Historically the clientele for American higher education has been young people, aged 17–22. The clientele has included the wealthier segments of society rather than the poorer, more men than women, the intellectually well qualified rather than the intellectually disadvantaged, and a small percentage of the ethnic minority population. Today the traditionlly under-represented groups are enrolling in institutions of higher education in increasing numbers. Colleges are both seeking out such students and creating academic programs for them. In some instances, new institutions have been created for these students.

Examples:

A. Programs for adults:
The College for Human Services in New York, New York, is a two-year private college started in 1964 and is specifically designed to prepare adults for careers in human services.
The University of Montana, a state university in Missoula, Montana, has developed a network of geographically dispersed local learning centers designed to reach adults in rural Montana.

B. Programs for labor union members:
Empire State College, a public college in Albany, New York, has authorized the creation of a branch campus in New York City designed for people who work with labor union staffs.

C. Programs for women:
Continuing Education for Women at Temple University, an urban university in Philadelphia, Pennsylvania, provides instruction and counseling to women "whose opportunities for skilled employment and selffulfillment have been limited by the interruption of their education."

D. Programs for Latinos:
DQU in East Los Angeles, California, is a private community college that opened in 1971. It enrolls a student population

composed 50 percent of Native Americans and 50 percent of Latinos. DQU offers programs that vary from the traditional to ethnic culture, ranging from two weeks to two years.

E. Programs for convicts:
The University of Massachusetts, a public university in Amherst, Massachusetts, offers a program in jails with the purpose of transforming the jail from a custodial to an educational institution.

F. Programs for the poor:
The College of the Poor at the State University of New York at Buffalo, an urban public university in Buffalo, New York, is an experimental subunit within the undergraduate college. The College of the Poor offers instruction and counseling designed to increase the chances of the poor students receiving a degree.
Berea College in Berea, Kentucky, is a private liberal arts college that accepts only students unable to afford a college education. All students are required to work ten hours a week at the college.

G. Programs for Native Americans:
Navajo Community College in Many Farms, Arizona, is a private community college that offers a very traditional program to Navajos on a Navajo reservation. The college is controlled by the Navajo tribe.
California State University, Humboldt in Arcata, California, is a public university that offers a program designed to attract and educate Native Americans. This particular program is called the Natural Resources program.

H. Programs for blacks:
Nairobi College in East Palo Alto, California, is a private community college that was started in 1969 to educate black leaders in and for black communities.
The University of Ohio in Athens, Ohio, is a public university with the largest enrollment in the United States. Like many other colleges, it offers a program in black studies—the culture and history of black people. These institutions supplement efforts of more than a century to educate blacks in some hundred black colleges, most of which are found in the southeastern region and certain urban centers in the United States.

2. ***Programs that shorten the length of time required to earn a college degree***

The traditional length of time required to earn the undergraduate degree in America has been four years. Innovations for time-short-

ening include cutting the four-year degree program by one year, attending college prior to secondary school graduation, concurrent enrollment in both secondary school and college, college instruction in the secondary school, and the establishment of a new institution—the early college—that admits students into college at age 15 and 16, or after two years rather than the traditional four years of secondary school.

Examples:

A. Three-year college degrees:
St. Johns University in New York, New York, is a private university that offers a three-year degree by compressing the four-year curriculum. Students enroll for summer study and/or take additional courses during the academic year.
Francis Marion College in Florence, South Carolina, is a liberal arts school that combines the first two years of college. The academic requirements of the four-year curriculum are reduced by employing intensified interdisciplinary breadth and general education seminars for honors students.
The State University of New York College at Geneseo in Geneseo, New York, is a public college that permits all students to accelerate their studies by passing general education achievement tests and two-year comprehensive examinations after one year of college attendance.

B. Entrance into college prior to graduating from high school (early admission): Shimer College in Mt. Carroll, Illinois, is a private liberal arts college that admits highly qualified students after three years of secondary school. This practice is common for excellent high school students at many universities.

C. Concurrent secondary school and college attendance:
Brandeis University in Waltham, Massachusettss, is a private university that permits secondary school students to enroll in college courses while attending secondary school full-time. The college courses are substituted for secondary school courses in the student's academic program.

D. College instruction in the secondary school:
Appalachian State University in Boone, North Carolina, is a rural public college that trains local secondary school teachers to teach college-level courses in the secondary schools. Some of the secondary school students involved in the program enter college as second-year college students.

E. Early college:

Simon's Rock in Great Barrington, Massachusetts, is a private liberal arts college that admits students after two years of secondary school. After four years of study at Simon's Rock a student can receive a bachelor's degree.

3. ***Programs that utilize noncourse formats***

The traditional medium in which higher education in the United States is dispersed is the course. Alternatives to the course currently in use include competency-based education, which requires mastery by any of several means available to students of a curriculum stated in the form of educational outcomes or objectives; progress by exam, which requires only that students pass a series of comprehensive exams to receive a degree; and contract learning, which involves an agreement between a faculty adviser and a student that requires the academic program to be completed over a span of time.

Examples:

A. Competency-based education:
Alverno College in Milwaukee, Wisconsin, is a private religious college that states its requirements in terms of outcomes or competencies demanded of graduates. There are eight competencies: 1) effective communication skills, 2) analytical capability, 3) problem-solving abilities, 4) a facility for value judgments and independent decisions, 5) a facility for social interaction, 6) understanding of the relationship between the individual and the environment. 7) awareness and understanding of contemporary work, 8) knowledge, understanding, and responsiveness to the arts and knowledge and understanding of the humanities.
"Each competence is set forth in a developmental sequence of six stages, and each stage is defined in a manner that facilitates assessment of performance." Competence may be achieved on the basis of past experience, current courses, self-or independent study, work, and so on. Other competency programs include: Sterling College (private religious college), Sterling, Kansas; Bowling Green State University (a program within a public university), Huron, Ohio.

B. Progress by exam:
Hampshire College in Amherst, Massachusetts, is a private liberal arts college that requires only that students pass six comprehensive exams to graduate. Four exams are in general education or breadth areas, and two are in the area of major or depth study.

C. Contract learning:

New College in Sarasota, Florida, is a liberal arts college that requires that every student meet with his or her adviser to plan a program of study for each term. The agreed-upon program, which is called a contract, may consist of courses, off-campus study, independent study, or the like. Nine successful contracts are required for graduation.

Other examples: Empire State College (public college), Albany, New York; New College-University of Alabama (subunit in a public university), University, Alabama.

4. ***Programs that unite education and work***

Traditionally the world of higher education has been separate from the world of work. Because attendance at institutions of higher education has demanded a full-time commitment, all but a very few students have been able to go to school and work full-time simultaneously. Furthermore, education designed specifically for work preparation historically has been labeled anti-intellectual and has been excluded from universities on these grounds. Today the integration of higher education and work is becoming quite common. Innovative mechanisms for uniting the two include career planning and counseling programs, which seek to aid the student in formulating life and career goals; cooperative education or work-study programs, which mix periods of work and academic study; and vocational-major programs, which permit students to concentrate their study on a vocational or career subject.

Examples:

A. Career planning and counseling:
Slippery Rock State College in Slippery Rock, Pennsylvania, is a public college that offers a voluntary four-year, noncredit program called LEAP, designed to supplement the academic program and compensate for its lack of career orientation. LEAP helps the student in formulating life goals and in gaining experience in potential career areas.

B. Cooperative education or work-study:
Antioch College in Yellow Springs, Ohio is a private liberal arts college that offers a five-year program of alternate terms of work and study. All Antioch students are required to participate in the program.
Other examples: La Guardia Community College (pudlic community college), New York, New York; Tunbridge program at Lone Mountain College (students and tutor study field of interest

and interview professionals in the field), San Francisco, California.

C. Career-major study:
Miami-Dade Community College in Miami, Florida, is a public community college that offers majors in mortuary science, air conditioning, general office careers, landscape development, police science, and teacher assistance.
The University of Arkansas at Pine Bluff, Arkansas, is a public university that offers major study in automotive technology, brick masonry, and welding technology.
Today many two-year community colleges and four-year colleges include vocationally and/or occupationally-oriented courses.

5. ***Programs that utilize nontraditional time schedules***

Traditionally American higher education has been a five-, sometimes six-day-a-week, 8 o'clock in the morning through 5 o'clock in the afternoon enterprise. Today higher education programs are utilizing the previously unfilled time blocks. Night schools are very common. Current innovations in non-traditional time scheduling include weekend colleges, which offer intensive instruction only on Friday evening, Saturday, and Sunday; and early morning colleges, which have classes that meet only prior to the start of the workday.

Examples:

A. Weekend college:
C. W. Post College in Greenvale, Long Island, New York (private college).

B. Early morning college:
Long Island University in Long Island, New York, a private university, is the most extreme example, offering classes that are held on a commuter train during the trip between the suburbs and New York City.

6. ***Programs which are noncampus based***

American higher education has historically taken place on the college campus. Today the walls of the campus are opening to include the greater society. Innovations in this area include the external degree, which is based largely upon self- or independent study; credit for life experience, which involves receiving academic credits for prior experiences that are the equivalent of college courses; study by television; employment of a faculty consisting largely of community professionals who work full-time in nonteaching jobs; the use of such local or

community facilities, as libraries, storefronts, museums, railroad stations, neighborhood centers, and fraternal organizations for instruction.

Examples:

A. External degree:
The Regents External Degree offered by the University of the State of New York is based solely upon a series of exams covering the course of college studies. Study for the exam is entirely independent and undirected.
Metropolitan State University, a public university in Minneapolis, Minnesota, offers a program that credits past learning, counsels students, arranges for independent study, and provides non-campus based instruction.

B. Credit for life experience:
New College at the University of Alabama in University, Alabama. enrolled a student with over 30 years of professional experience in television, radio, and newspapers. He had written national news documentaries, edited newspapers and was the public relations officer for a school board. After the student's experience was evaluated in terms of college study, he was awarded over two years of college credit.
Other notable examples: University Without Walls (consortium of public and private colleges and universities), Yellow Springs, Ohio; Empire State College (public college), Albany, New York.

C. Study by television:
Flathead Valley Community College, a public community college in Kalispell, Montana, has the capacity to provide college instruction to 85 percent of the local residents in the Flathead Valley via television.

D. Community faculty:
Metropolitan State University, a public university in Minneapolis, Minnesota, has a faculty composed largely of community people who instruct and advise students on a part-time basis.

E. Community facilities:
Metropolitan State University in Minneapolis, Minnesota, offers instruction and counseling in storefronts, neighborhood centers, and libraries. Flathead Valley Community College in Kalispell, Montana, offers instructions in a remodeled garage, a railroad station, and fraternal organizations.

7. ***Programs that emphasize new subjects***

Today new institutions with new subject foci are being established.

Examples:

A. Environmental studies:
University of Wisconsin-Green Bay (public college), Green Bay, Wisconsin.

B. Transcendental meditation:
Maharishi International University (private college), Fairfield, Iowa.

C. Human services:
College of Human Resources (private college), New York, New York.

8. ***Programs based in organizations not usually associated with higher education***

Today several new educational organizations are springing up. Innovations in this sphere include the brokerage organization, which advises and counsels students, aids students in documenting prior learning, and speaks for the student in gaining admission and credit in educational programs both inside and outside the university; and schools organized and operated by industrial organizations.

Examples:

A. Brokerage organizations:
The Regional Learning Service of Central New York in Syracuse, New York, offers free counseling and assistance by paraprofessionals to adults interested in educational experiences.

B. Industry-based schools:
Bell and Howell Schools, Chicago, Illinois.

3. RELEVANT STATISTICS OF HIGHER EDUCATION

Edited by
Research Institute for Higher Education,
Hiroshima University

A. Statistics on Higher Education in Japan
B. International Comparison of Higher Educational Statistics
C. Organization of Educational System in Japan

A. Statistics on Higher Education in Japan

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I. Basic Facts on the Expansion of Higher Education

1. Number of Higher Educational Institutions

(As of October, 1974)

	Total	Universities	Junior Colleges	Technical Colleges
Total	984	413	506	65
National	163	81	28	54
Local Public	84	33	47	4
Private	737	299	431	7

2. Number of Students in Colleges and Universities

(As of May 1, 1974)

		Total	Universities	Junior Colleges	Technical Colleges	Graduate Schools
Enrolment	Total	1,976,582	1,585,674	326,163	18,330	46,415
	National	354,067	302,038	11,642	13,978	26,409
	Local Public	65,774	44,764	17,240	1,428	2,342
	Private	1,556,741	1,238,872	297,281	2,924	17,664
Number of Entrants in the Latest Year	Total	599,620	407,528	164,077	9,385	18,630
	National	96,317	73,190	3,817	7,184	11,126
	Local Public	20,039	10,434	8,006	731	868
	Private	484,264	323,904	152,254	1,470	6,636

3. Number of Teaching Staff (full-time) in Colleges and Universities

(As of May 1, 1974)

	Total	Universities	Junior Colleges	Technical Colleges
Total	105,397	86,576	15,169	3,652
National	44,330	40,868	548	2,914
Local Public	7,321	5,512	1,472	337
Private	53,746	40,196	13,149	401

Note: Number includes presidents, vice-presidents, professors, associate professors, lecturers and research assistants.

4. Number of Colleges and Universities with Correspondence Courses and Their Students

(As of May 1, 1974)

	Number of Institutions	Regular Students		Others (Auditors, etc.)
		Entrants during latest year	Total Enrolments	
Total	18	15,605	105,313	41,403
Universities	11	10,872	82,026	20,676
Junior Colleges	7	4,733	23,287	20,727

5. Number of Miscellaneous Schools, Teaching Staff and Students

(As of May 1, 1974)

	Number of Schools	Number of Teaching Staff (Full-Time)	Number of Students	Number of Students required to have a high school diploma as a condition for entrance
Total	7,996	45,584	1,211,566	360,718
National	70	214	4,263	4,263
Local Public	269	1,399	23,131	12,098
Private	7,657	43,971	1,184,172	344,357

6. Annual Trends Number of New Entrants and Their Relationship to the Total Number of High School Graduates

	New Entrants			As a Percent of High School Graduates		
	Total	Universities	Junior Colleges	Total	Universities	Junior Colleges
1955	169,840	132,296	37,544	10.1%	7.9%	2.2%
1960	205,240	162,922	42,318	10.3	8.2	2.1
1965	330,480	249,917	80,563	17.0	12.8	4.2
1970	459,696	333,037	126,659	23.6	17.1	6.5
1971	494,213	357,821	136,392	26.8	19.4	7.4
1972	517,778	376,147	141,631	29.8	21.6	8.2
1973	544,331	389,560	154,771	32.2	23.0	9.2
1974	571,605	407,528	164,077	34.7	24.7	10.0

7. Percentage Distribution of Universities, Junior Colleges and Technical Colleges

(1974)

	Total	National	Local Public	Private
Total	100.0%	14.5%	3.3%	82.2%
Universities	100.0	17.9	2.6	79.5
Junior Colleges	100.0	2.3	4.9	92.8
Technical Colleges	100.0	76.5	7.8	15.7

8. Percentage Distribution of Entrants in Higher Educational Institutions by Establishing Body

	1950	1960	1965	1965	1970	1974
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
National	40.6	23.1	19.1	17.7	15.7	14.5
Local Public	6.0	6.0	5.3	4.8	3.9	3.3
Private	53.4	70.9	75.6	77.5	80.4	82.2

9. Ratio of Applicants Accepted in Universities (Undergraduate), Graduate Schools and Junior Colleges by Establishing Body (1975)

	Total			National			Local Public			Private		
	Applicants	Entrants	Ratio	Applicant	Entrants	Ratio	Applicants	Entrants	Ratio	Applicants	Entrants	Ratio
Universities (Undergraduate)	2,733,072	423,942	15.5	452,687	75,479	16.7	104,767	10,673	10.2	2,175,618	337,790	15.5
Graduate Schools	11,221	5,414	48.2	8,533	4,123	48.3	256	97	37.9	2,432	1,194	49.1
Junior Colleges	379,166	174,930	46.1	10,492	4,371	41.7	34,985	8,189	23.4	333,689	162,370	48.7

10. Number and Percent of Females among First Year Entrants in Colleges and Universities

	Total	Universities	Junior Colleges	Technical Colleges
1960	53,808 (26.2)%	24,183 (14.8)%	29,625 (70.0)%	— (—)%
1965	108,122 (32.0)	44,332 (17.7)	63,763 (79.1)	127 (1.7)
1970	169,212 (36.0)	62,093 (18.6)	106,952 (84.4)	167 (1.6)
1974	236,206 (40.6)	92,014 (22.6)	144,008 (87.8)	184 (1.8)

11. Females Entering Higher Educational Institutions as a Percent of High School Graduates by Establishing Body

	Total	Universities	Junior Colleges	Technical Colleges
1960	5.5% (15.0)%	2.5% (13.7)%	3.0% (1.2)%	—% (—)%
1965	11.3 (22.6)	4.6 (20.7)	6.7 (1.7)	0.0 (0.3)
1970	17.7 (41.1)	6.5 (27.3)	11.2 (2.0)	0.0 (0.8)
1974	29.3 (41.1)	11.4 (37.5)	17.9 (2.4)	0.0 (1.2)

Note: Figures in parentheses indicate the percentages for male students.

12. Number of Universities with Graduate Schools

(As of October 1, 1974)

	All Universities	Universities with Graduate Schools	Universities with Master's and Doctor's Courses	Universities with Master's Courses only	Universities with Doctor's Courses only
Total	413	205 (49.6)%	106 (25.7)%	79 (19.1)%	20 (4.8)%
National	81	65 (80.2)	26 (32.1)	38 (46.9)	1 (1.2)
Local Public	33	19 (57.6)	8 (24.2)	4 (12.1)	7 (21.2)
Private	299	121 (40.5)	72 (24.1)	37 (12.4)	12 (4.0)

Note: Figures in parentheses indicate the percentages of total number of institution.

13. Enrolments in Graduate Schools by Establishing Body

(As of May 1, 1974)

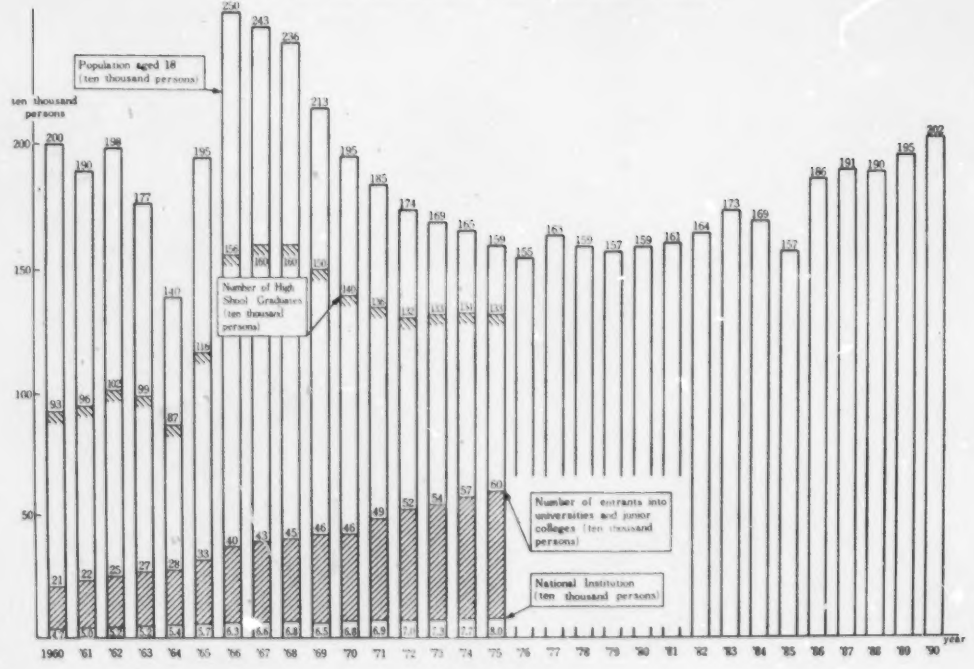
	Total	Master's Courses	Doctor's Courses
Total	46,415 (100.0)%	32,030 (100.0)%	14,385 (100.0)%
National	26,409 (56.9)	17,780 (55.5)	8,629 (60.0)
Local Public	2,342 (5.0)	1,382 (4.3)	960 (6.7)
Private	17,664 (38.1)	12,868 (40.2)	4,796 (33.3)

14. Enrolments in Graduate Schools by Field of Study

(As of May 1, 1974)

	Master's Courses	Doctor's Courses
	%	%
Humanities	5,844 (18.2)	2,317 (16.1)
Social Sciences	4,7[illegible] 14.8)	2,206 (15.3)
Education	1,184 (3.7)	481 (3.3)
Natural Sciences	3,027 (9.5)	2,469 (16.8)
Engineering	12,595 (39.3)	2,458 (17.1)
Agriculture	2,500 (7.8)	985 (6.8)
Medicine & Dentistry	— (—)	3,117 (21.7)
Pharmacy	942 (2.9)	347 (2.4)
Nursing & Health Education	61 (0.2)	25 (0.2)
Home Economics	277 (0.9)	17 (0.1)
Art	872 (2.7)	23 (0.2)
Total	32,030 (100.0)	14,385 (100.0)

15. Size and Distribution of the Higher Education Population


Population aged 18 (ten thousand persons)
ten thousand persons
Number of High Shool Graduates (ten thousand persons)
Number of entrants into universities and junior colleges (ten thousand persons)
National Institution (ten thousand persons)
year
200
150
100
50
1960 '61 '62 '63 '64 '65 '66 '67 '68 '69 '70 '71 '72 '73 '74 '75 '76 '77 '78 '79 '80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90

II. Teaching and Research Conditions in Higher Education

1. Expenditures per Student in Universities

(1972)

National	794,000 yen
Local Public	692,000
Private	312,000

Note: 1. Excludes expenditures for attached hospitals and research institutes.
2. Indicates expenditures and capital expenditures per student (undergraduate and graduate) in both day and evening courses for national and local public institutions and day courses for private institutions.

2. Number of Students per Full-time Teaching Staff in Universities (4 year course)

(1974)

National	8.0
Local Public	8.5
Private	31.3

Note: 1. Number of students includes undergraduate and graduate students in day and evening courses.
2. Number of teachers includes presidents, professors, associate professors, lecturers and assistants.

3. Floor and Land Space per Student in Universities (4 year day courses)

(1974)

	Floor Space per Student	Land Space per Student
National	22.2 m²	84.3 m²
Local Public	18.7	62.6
Private	7.3	29.9

Note: 1. Excludes attached hospitals and research institutes.
2. "Floor space" includes school buildings, auditoriums and physical education facilities. "Land space" includes floor space plus external ground space.

III. Expenditures on Higher Education

1. Expenditures on Higher Education

[unit: one million yen] (1973)

	Total	National Government Expenditures	Local Government Expenditures	Others	Proportion Represented by Tuition Fee
National	461,962 (100.0)	461,962 (100.0)	— (—)	— (—)	11,936 (2.6)
Local Public	78,106 (100.0)	1,759 (2.3)	76,331 (97.7)	16 (0.0)	2,108 (2.7)
Private	611,056 (100.0)	48,182 (7.9)	9,953 (1.6)	552,921 (90.5)	259,105 (42.4)
Total	1,151,124 (100.0)	511,903 (44.5)	86,284 (7.5)	552,937 (48.0)	273,149 (23.7)

Note: 1. This table includes expenditures for universities, junior colleges, technical colleges, attached hospitals and research institutes.
2. For public institutions, "others" includes donations not counted in public expenditure, for private institutions, it includes expenditures by establishing body, loans, donations, tuition fees, etc.
3. "Tuition fees,etc." includes the total amount of beneficiaries' contributions including tuition, admission fees, entrance examination fees, laboratory fees, building fund contributions, etc.

2. Educational Expenditures in Relation to National Income

	National Income (A)	Total Educational Expenditures (B)	Higher Educational Expenditures (C)	(B)/(A)	(C)/(A)	(C)/(B)
	(one hundred million yen)	(one hundred million yen)	(one hundred million yen)	(%)	(%)	(%)
1965	261,169	16,052	3,682	6.2	1.4	22.9
1966	305,035	18,210	4,420	6.0	1.4	24.3
1967	362,092	20,434	5,045	5.6	1.4	24.7
1968	428,487	23,081	5,618	5.4	1.3	24.3
1969	498,159	26,486	6,129	5.3	1.2	23.1
1970	591,410	31,338	6,923	5.3	1.2	22.0
1971	658,982	37,426	8,090	5.7	1.2	21.4
1972	764,452	44,030	9,420	5.8	1.2	21.4
1973	916,948	54,444	11,511	5.9	1.3	21.1

Note: "Higher Educational Expenditures" include expenditures for national, local public and private institutions (including attached research institutes and hospitals) as well as junior colleges and technical colleges.

3. Annual Trends in Higher Educational Expenditures per Student by Establishing Body

(unit: 1,000 yen)

	Total	National	Local Public	Private
1955	85	129	120	58
1960	138	207	203	102
1965	260	490	300	182
1966	272	505	316	196
1967	276	532	339	197
1968	283	566	356	199
1969	292	588	382	205
1970	317	647	452	219
1971	339	697	541	234
1972	398	768	618	292

4. Sources of Income for Private Higher Educational Institutions

(unit: 100 million yen)

	Total	Subsidies	Tuition	Donations	Loans	Others
1966	2,088(100%)	37(2%)	1,095(52%)	170(8%)	520(25%)	267(13%)
1967	2,408(100)	46(2)	1,340(56)	184(8)	568(24)	271(11)
1968	2,686(100)	75(3)	1,532(57)	205(8)	537(20)	338(13)
1969	2,957(100)	84(3)	1,715(58)	231(8)	555(19)	373(13)
1970	3,281(100)	168(5)	1,862(57)	268(8)	478(15)	505(15)
1971	3,423(100)	225(7)	1,986(58)	279(8)	440(13)	493(14)
1972	4,399(100)	383(9)	2,270(51)	398(9)	558(13)	790(18)

Note: "Others" includes auxiliary enterprise income from basic property, property opperation, property disposal, attached hospitals, student dormitories, etc.

IV. Economic Conditions of Students and Scholarships' Data

1. Percentage Distribution of Students by Family Income

(a) Annual Change

(Day Courses in Universities)

Year	Lower Quintile	Lower Middle Quintile	Middle Quintile	Upper Middle Quintile	Upper Quintile
1963	8.8%	10.9%	13.0%	18.6%	48.7%
1965	8.3	10.4	13.4	21.7	46.2
1966	7.0	9.9	11.5	23.0	48.6
1968	6.9	7.3	11.3	25.0	49.5
1970	8.6	8.0	14.5	22.0	46.9
1972	10.5	13.7	13.4	20.2	42.2
1974	8.0	7.5	12.6	21.8	50.1

(b) Percentage Distribution of University Students by Establishing Body

(1974—Day Courses in Universities)

	Lower Quintile	Lower Middle Quintile	Middle Quintile	Upper Middle Quintile	Upper Quintile
Average	8.0%	7.5%	12.6%	21.8%	50.1%
National	14.4	11.2	16.0	24.3	34.1
Local Public	9.8	9.7	14.3	21.0	45.7
Private	6.1	6.5	11.6	21.2	54.6

Actual Income Figures for the Five Quintiles (1974)

(1,000 Yen)

Total	Lower Quintile	Lower Middle Quintile	Middle Quintile	Upper Middle Quintile	Upper Quintile
—	0~1,331	1,331~1,767	1,767~2,246	2,246~3,000	3,000~
100%	20%	20%	20%	20%	20%

Source: Prime Minister's Office, *Annual Survey of Household Economy*, 1974.

2. Annual Expences of University Students (Day Courses in University)

(1974)

	School Expenses (1000 yen)			Living Expenses (1000 yen)			Total
	Tuition Fee & etc.	Commuting & etc.	Sub-Total	Food & Housing	Others	Sub-Total	(1000 yen)
National	31	80	111	209	136	345	456
Local Public	32	87	119	179	142	321	440
Private	162	78	240	197	170	367	607
Average	132 (23%)	79 (14%)	211	199 (35%)	162 (28%)	361	572 (100%)

3. Comparison of Tuition Fees by Type of Institution

(Yen)

	National		Local Public		Private	
	Annual Tuition	Index	Annual Tuition	Index	Annual Tuition	Index
Universities	96,000	100	27,847	29	221,008	230
Junior Colleges	72,000	100	21,973	30	135,313	188
Technical Colleges	43,200	100	10,330	24	127,222	294

4. Number of Students Receiving Scholarships by Source of Funds

	Japan Scholarship Foundation	Private Organizations	Total
Universities	194,144(79.9%)	48,926(20.1%)	243,070(100.0%)
Graduate Schools	21,414(88.1)	2,886(11.9)	24,300(100.0)
Technical Colleges	10,668(71.9)	4,176(28.1)	14,844(100.0)

Note: "Universities" include junior colleges.

5. Size of Monthly Loans Given by the Japan Scholarship Foundation

(a) Ordinary Scholarship (Loans)

Type of Institution	Monthly Amount (1976)
	Yen
Universities:	
National & Local Public	11,000
Private Universities	12,000
Private Junior Colleges	11,500
Graduate Schools:	
Master's Courses	38,000
Doctor's Courses	48,000

(b) Special Schoalrship (Loans)

Type of Institution	Monthly Amount (1976)
	Yen
National & Local Public Universities:	
Commuting Students	13,000
Boarding Students	18,000
Private Universities:	
Commuting Students	15,000
Boarding Students	23,000
Private Junior Colleges:	
Commuting Students	13,500
Boarding Students	19,000

6. Scholarship Students in Relation to Total Enrolment

(1974)

Type of Institution			Number of Scholarship Students			As Percent of Total Enrolments		
			Ordinary Scholarship (Loans)	Special Scholarship (Loans)	Total	Ordinary Scholarship (Loans)	Special Scholarship (Loans)	Total
Universities	Universities	National	30,234	40,932	71,166	13.1	17.7	30.8
		Local Public	5,101	5,099	10,300	11.4	11.4	22.8
		Private	47,150	24,499	71,649	3.8	2.0	5.8
		Total	82,485	70,530	153,015	5.5	4.7	10.1
	Junior Colleges	National	700	320	1,020	6.0	2.7	8.8
		Local Public	1,537	735	2,272	8.9	4.3	13.2
		Private	7,909	2,068	9,977	2.7	0.7	3.4
		Total	10,146	3,123	13,269	3.1	1.0	4.1
	Teacher Training Institutions	National	6,543	23,525	30,068	9.1	33.8	43.2
		Private	81	579	660	3.0	21.4	24.4
		Total	6,624	24,104	30,728	9.2	33.3	42.5
Graduate Schools	Master's Courses	National	8,124	—	8,124	49.3	—	49.3
		Local Public	575	—	575	45.5	—	45.5
		Private	3,737	—	3,737	35.8	—	35.8
		Total	12,436	—	12,436	44.1	—	44.1
	Doctor's Courses	National	6,535	—	6,535	89.0	—	89.0
		Local Public	624	—	624	78.0	—	78.0
		Private	2,426	—	2,426	62.8	—	62.8
		Total	9,585	—	9,585	79.8	—	79.8

B. International Comparison of Higher Educational Statistics

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1. Enrollment Growth Rates in Higher Education

Country	1960-60	1960-70
Canada	5.5	10.6[1]
France	3.3	13.2[1]
Germany (F.R.)	7.9[2]	4.7[2]
Italy	1.7	9.6
Japan	11.5	9.0
Netherlands	5.6	7.7
Sweden	5.8	11.8
United Kingdom	−0.3	8.3[3]
United States	4.6	7.7

1) 1960-69. 2) 1961-70. 3) 1960-61
Source: OECD, Towards Mass Higher Education, 1974.

2. Enrollment Ratio in Higher Education

Country	(Age)	1967	1970
Japan	18 - 21	16.3	18.7
U.S.A.	18 - 24	28.7	31.6
United Kingdom	18 - 20	12.7	18.2
France	18 - 22	15.7	17.0
Germany (F.R.)	19 - 22	11.0	13.6

Source: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

3. Admission Ratio to Post-Secondary Education

(as percentage of age group)

Country	Age Group Considered	1960	1965	1970
France	18 - 20	17.5	23.0	27.1*
Germany (F.R.)	20 - 22	6.8	9.7	13.7
Italy	19 - 21	7.6	13.0	24.0
Netherlands	17 - 20	12.0	12.8	18.3
Sweden	19 - 21	9.4	15.2	26.1
United Kingdom	18 - 20	—	—	29.0
Australia	17 - 18	—	—	22.2
Japan	18 - 19	11.1	18.6	26.8
United States	18	35.7	38.8	47.0

* 1969.
Source: OECD, Towards Mass Higher Education, 1974.

4. Ratio of Graduate Students in Undergraduate students

Country		Undergraduate (A)	Graduate (B)	(A)/(B)
Japan	(1974)	1,586,000	46,000	2.9%
U.S.A.	(1972)	7,007,000	943,000	13.5
United Kingdom	(1970)	186,000	42,000	22.6
France	(1970)	540,000	89,000	16.5

Source: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

5. Proportion of Female Students in Higher Educational Institutions

Country	1960	1965	1970
Japan	14 %	16 %	18 %
U.S.A.	38	39	41
United Kingdom	25	26	29
France	41	43	45
Germany (F.R.)	20	21	31
Netherland	18	18	20

Source: OECD, Data from the Conference on the Future of Post-Secondary Education, 1973.

6. Proportion of Foreign Students in Higher Educational Institutions

Country	Last year for which data is available		
	Year	Actual number	Percent
Japan	1969	10,086	0.6 %
U.S.A.	1967	110,315	1.7
United Kingdom	1967	15,234	7.6
France	1967	56,600	9.9
Germany (F.R.)	1967	23,139	6.7

Source: Ministry of Education in Japan, Educational Standards in Japan, 1970.

7. Percent Distribution of Enrollments in Higher Educational Institutions by Field of Study

Country	Japan	U.S.A.	United Kingdom	France	Germany (F.R.)
Year	1972	1970	1970	1970	1971
All fields	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Humanities & Social Sciences	50.7	54.8	26.7	60.0	42.1
Natural Sciences	26.9	18.2	27.9	22.1	29.3
Education	8.8	21.0	39.3	—	18.9
Medicine & Dentistry	1.5	0.6	6.8	17.9	8.9
Others	12.1	5.4	—	3.5	0.8

Source: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

8. Degrees Awarded by Field of Study

Country	Japan	U.S.A.	United Kingdom	France	Germany (F.R.)
Year	1972	1970	1969	1970	1970
Humanities & Social Sciences	20.8 %	39.7 %	29.9 %	22.6 %	22.2 %
Sciences & Engineering	60.6	20.4	60.0	42.0	32.9
Education	2.3	36.2	—	—	—
Medicine & Dentistry	14.0	1.7	9.5	64.0	44.9
Others	2.3	2.0	—	—	—

Sources: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

9. Student-Teacher Ratio

Country	1960	1970-71
Canada	11.6	13.3
France	25.7	13.4
Germany (F.R.)	11.8	11.2
Japan	10.1	18.4
Netherlands	21.3	8.4
Sweden	10.1	19.5
United Kingdom	8.6	9.6
U.S.A.	10.4	9.8

Source: OECD, Quantitative Trends in Teaching Staff in Higher Education, 1971.

10. Average Duration of University Studies and Approximate Graduation Ratio

Country	Duration of Studies (in years)		Approximate Gradation Ratio* (1960–65)
	Theoretical	Actual	
France	4	5	44 %
Germany (F.R.)	4-4.5	5	52
Italy	4	6	56
Netherlands	4-6	7	60
Sweden	4	4-5	68
United Kingdom	3-4	3-4	[illegible]
Japan	4	4	91
United States	4	4-5	70

* Average proportion of new entrants who obtain their first university degree.

Source: OECD, Development of Higher Education.

11. Comparison of Public and Private Sector Higher Education in the United States and Japan

(1968)

Characteristics	United States		Japan	
	Public	Private	Public	Private
% of total students	70.0	30.0	28.0	72.0
% of income (excluding research grants) from: Fee and endowments, etc.	27.7	91.8	3.4	97.8
: Government sources	72.3	8.2	96.6	2.2
Average cost per student (in US $)	2,182	3,421	1,700	425
Number of students per full-time teacher	16.1	11.0	9.0	36.3
Average fees (in US $)	278	1,313	52	267

Source: OECD, Towards Mass Higher Education, 1974.

12. Social Origins of Students

Country	Year	Socio-Occupational Category*				
		A	B	C	D	E
England and Wales	1970	46.0	27.0	—	—	27.0
France	1968	47.0	30.7	6.3	—	11.9
Germany (F.R.)	1970	26.2	35.7	4.2	14.3	12.6
Netherlands	1970	37.0	49.0		—	14.0
Japan**	1972	52.4	17.2	14.4	9.9	6.1

* Classification: A—upperstratum
B—middle stratum
C—independent agriculture
D—other independent
E—lower stratum

** Classification: A—upper
B—upper middle
C—middle
D—lower middle
E—lower
} quintile

Source: 1) OECD, Towards Mass Higher Education, 1974.
2) Data from Ministry of Education in Japan.

13. Growth Rate of Higher Educational Expenditures compared to Growth Rate of Total Educational Expenditures, Public Expenditures and GNP (1961–70; in current prices)

Country	Higher Educational Expenditures	Educational Expenditures	GNP	Public Expenditures
Canada	29.5	18.2(1961-69)	8.7	10.6
France	30.5	18.4(1960-69)	10.7	12.4
Germany (F.R.)	12.4	11.2(1960-69)	8.3	10.2
Japan	13.2	15.8(1960-69)	16.1	14.9
Netherlands	17.6	14.1(1960-68)	10.7	14.1
Sweden	25.5	16.7(1960-69)	9.0	14.1
United Kingdom	18.7	11.4(1961-67)	6.9	10.2
U.S.A.	14.2	11.8(1959-69)	6.8	10.9

Souurce: UNESCO Statistical Yearbook 1971.
National Accounts for OECD Countries.

14. Percentage of GNP allocated to Higher Education

Country	1961	1970
	%	%
Canada	0.5	2.7
France	0.2	0.6
Germany (F.R.)	0.4	0.7
Japan	1.2	1.0(1969)
Netherlands	0.3	1.2(1969)
Sweden	0.3	1.0
United Kingdom	—	—
U.S.A.	1.1(1959/60)	2.5(1970/71)

Source: OECD, Towards Mass Higher Education, 1974.

15. Percentage of National Income Allocated to Higher Education

	Japan	U.S.A.	United Kingdom	France	Germany (F.R.)
1965	1.4%	2.7%	0.8%	—%	1.0%
1966	1.4	2.8	0.9	0.6	1.0
1967	1.4	3.0	0.9	0.6	1.1
1968	1.3	3.0	0.9	0.6	1.1
1969	1.2	3.2	1.0	0.7	1.2
1970	1.2	3.4	—	0.8	1.3
1971	1.2	3.5	—	0.8	1.5

Source: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

16. Sources of Higher Educational Expenditures

Country			Central Government	State or Local Government	Sub-total	Tuition fees, etc.	Endowments and Other Sources	Sub-total	Total
Japan	1972	Average	45.1%	7.6%	52.7%	25.1%	22.2%	47.3%	100.0%
		Public	83.2	14.7	97.9	2.1	0.0	2.1	100.0
		Private	6.7	0.4	7.1	47.4	45.5	92.9	100.0
U.S.A.	1970	Average	(Federal Government) 13.6	31.4	45.0	21.0	34.0	55.0	100.0
		Public	13.2	46.9	60.1	13.1	26.8	39.9	100.0
		Private	14.1	2.5	16.6	35.8	47.6	83.4	100.0
United Kingdom	1970		86.9	0.5	87.4	6.4	6.2	12.6	100.0
France	1968		95.0	—	95.0	5.0	—	5.0	100.0
Germany (F.R.)	1965		90.6		90.6	3.7	5.7	9.4	100.0

Source: Digest of Educational Statistics, 1973.
Statistics of Education, 1971.
OECD, The Cost and Finance of Higher Education.

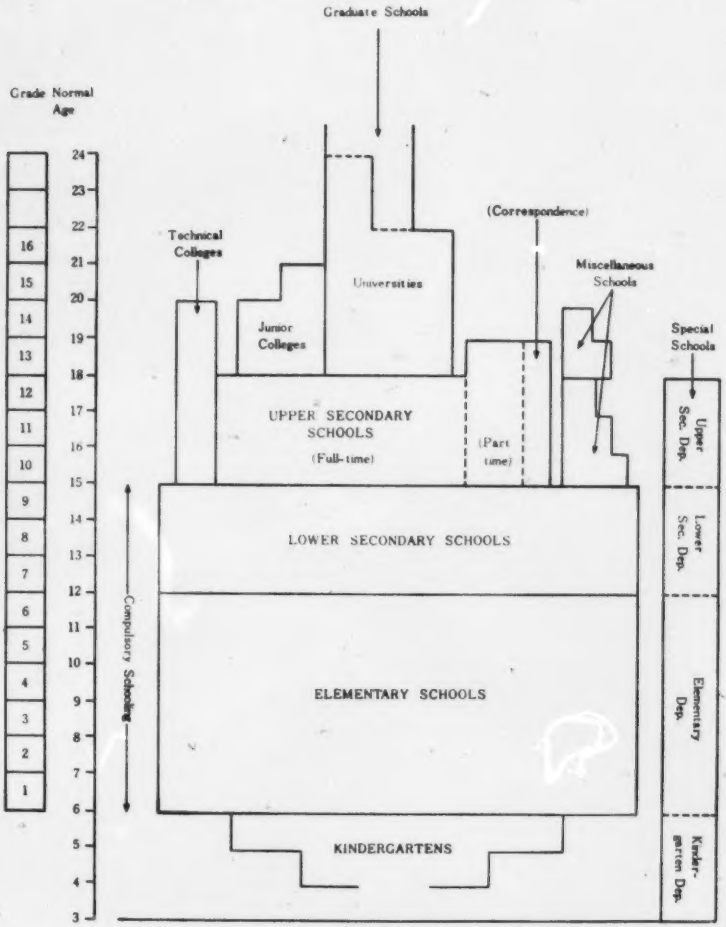
17. Educational Expenditures per Student

Country			Educational Expenditures per Student (1,000 yen)	
			Higher Education	Elementary & Secondary Education
Japan(1)	1971	Total	444	153
		Public	931	155
		Private	386	135
U.S.A.	1971		1,326	319
United Kingdom	1971		1,335(2)	167
France	1971		505	162
Germany (F.R.)	1971		1,759	160(2)

• Note: (1) Educational expenditures include expenditures for attached hospitals, attached research institutes, technical colleges, etc.
Number of students includes the number enrolled in day and evening undergraduate courses, graduate schools, junior colleges and technical colleges.
(2) Figures for higher education in the United Kingdom are from 1969; for elementary and secondary education in Germany, they are from 1970.

Source: Ministry of Education in Japan, International Comparison of Educational Indicators, 1973.

C. Organization of Educational System in Japan



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JAPANESE SUMMARY

〔日本語要約〕

広島高等教育国際セミナー

主　催・広島大学
名　称・広島高等教育国際セミナー
テーマ・未来の高等教育システムを求めて
—機会への接近と構造—
PERSPECTIVES FOR THE FUTURE SYSTEM OF HIGHER EDUCATION —"Access" and "Structure"—
日　時・昭和51年4月22日(木)～23日(金)
場　所・広島グランドホテル(広島市)

I　セミナーの目的

1970年代も後半に入った今日，世界の高等教育はひとつの基本的な課題に当面している。それは，大学制度を中核として構成されている現行の高等教育体制は，四半世紀後に21世紀を迎える将来においても，充分に今後の社会・個人の必要性に対応できる教育システムたりうるか，という問題である。

1960年代に急速な膨脹・拡大をとげてきた大学制度は，たえず多様化していく個人的・社会的需要に適切に対応してきたとは必ずしもいえず，現実にいくたの深刻な社会的緊張と病理現象をもたらしつつあり，教育の拡張を無条件に進歩とみなす楽天的な見方は，いまや各方面からの挑戦にさらされている。しかも今後に出現してくる多彩な要求を現行の教育制度によってすべて吸収していくことは不可能であり，同時にコストの高い大学制度を今後も大幅に拡張していく方向は，社会の資源調達能力からいっても限界があることは明らかである。

かかる厳しい状況のもとにおいて，今後の時代の変化に有効に対応しうるためには，現行の高等教育はいかなる変革が必要であるか，またそのような方向への変革はいかにして可能なのか，という問題は，世界の教育関係者が緊急に解決を迫られている課題なのである。

以上のような問題意識にもとづいて，本セミナーは「未来の高等教育システムを求めて」というテーマをかかげ，これをとくにつぎのような観点から追求することを目指すものである。

① **転換期にある高等教育**
現代社会の文化的，社会的，政治的，経済的状況における高等教育の全体像をマクロな視点から位置づけ，高等教育の将来を展望する。（基調報告のテーマ）

② **高等教育機会への接近**
現代社会は高等教育の機会をどのように保障しようとしており，現在いかなる問題をはらんでいるか，また今後の高等教育の需要に対応するためには，高等教育の機会はどのように開かれるべきであるか？（第1セッション“Access”のテーマ）

③ **高等教育の機能と構造**
現行の高等教育システムの全体構造，社会にたいして果たしているその機能は，どのような矛盾と問題をはらんでいるか。今後の個人的・社会的必要性に対応するためには，高等教育の機能と構造はどのような変革を必要としているか？（第2セッション“Structure”のテーマ）

④ **高等教育の将来システム**
以上の討議をふまえたうえで，今後21世紀に向かう将来においても充分に有効な高等教育システムとはいかなるものであるか，またそれはいかにして可能であるか，を総合的に検討する。（総合シンポジウムのテーマ）

Ⅱ　セミナーの議題及び発表者

1　**基調講演**　—転換期の高等教育—

議　長　飯島宗一氏　広島大学学長

発表者

(1)　都留重人氏　一橋大学名誉教授

(2)　Clark Kerr　氏　元カリフォルニア大学総長
カーネギー高等教育政策審議会会長

2　**第1セッション**　—高等教育機会への接近—

議　長　Hans Leussink　氏　元ドイツ連邦共和国教育科学大臣

発表者

(1)　Torsten Husén　氏　ストックホルム大学教授

(2)　天城　勲氏　文部省顧問
高等教育懇談会・高等教育計画部会主査

3　**第2セッション**　—高等教育の機能と構造—

議　長　小林哲也氏　京都大学教授

発表者

(1)　新堀通也氏　広島大学教授

(2)　Henri Janne　氏　元ベルギー教育文化大臣
ブリュッセル大学教授

4　**シンポジウム**　—未来の高等教育システムを求めて—

議　長　James A. Perkins 氏　元コーネル大学学長
国際教育開発協議会
(ICED) 議長

報告者

(1)　Harlan Cleveland 氏　ASPEN 人文科学研究所
国際関係事業部長

(2)　阿部美哉氏　日本学術振興会
人物交流課長

Ⅲ　セミナーの概要

広島高等教育国際セミナーは「未来の高等教育システム」をテーマとして広島大学の主催により，1976年4月22，23の両日，広島グランドホテルにおいて開催された。このセミナーは永井文部大臣もその一員となっている一流大学人の世界的組織，国際教育開発協議会(ICED)の理事会が日本で開かれることになったのをきっかけとし，永井文部大臣，飯島広島大学長ほか関係各位の格段の努力の結晶として実現に至ったのである。広島大学には，昭和47年5月1日以来我が国唯一の「大学教育研究センター」が学内共同教育研究施設として設置されており，このセンターを中心に組織された実行委員会が運営に当たった。大学教育研究センターは，毎年全国から幅広く諸分野にまたがる客員研究員多数を受け入れて特徴ある活動を続けているのであって，今回の国際セミナーも広島大学におけるこのような大学改革推進のための常設的機関の実績なくしてはあり得なかったでろうと思われる。

このセミナーは，問題意識として，「大学制度を中核として構成されている現行の高等教育体制は，四半世紀後に21世紀を迎える将来においても，十分に今後の社会・個人の必要性に対応できる教育システムたり得るか」との問いを掲げ，「今後の時代の変化に有効に対応し得るためには，現行の高等教育はいかなる変革が必要であるか，またそのような方向への変革はいかにして可能なのか」を討議の主軸にすえる構想とした。この構想に基づいて，基調講演では「転換期の高等教育」が検討され，第1セッションでは「高等教育機会への接近」が，第2セッションでは「高等教育の機能と構造」が討議され，そしてシンポジウムでは「未来の高等教育システムを求めて」各方面からの可能性が提示された。開会式，これらの各セッション及び閉会式の司会者，論文発表者，主な討議内容等は，以下のとおりであった。

開会式

あいさつ　飯島宗一・広島大学学長
永井道雄・文部大臣（代読）
木田宏・文部省学術国際局長（現文部事務次官）
ジェームス・A・パーキンス・ICED理事長（元コーネル大学学長）

開会式では，高等教育の世界平和及び人類の進歩への貢献と本セミナーが人類最初の核兵器経験の地広島で開かれることの象徴的意味を述べた飯島氏のあいさつが印象深かった。永井大臣によって我が国の大学改革の方向と国際性拡張の重要性が指摘されたのち，木田氏が，来広に際してストライキと荒天のダブルパンチで福岡経由30時間になんなんとする苦行を余儀なくされたにもかかわらず，外国人参加者全員が終始快活に協力されたことに敬意を表したあいさつは，全参加者にある種の仲間意識を喚起した。最後に外国人参加者を代表したパーキンス氏は，ICEDのあり方の説明をかねて高等教育における個人の自主的貢献の重要性を訴えて感銘を与えた。

基調講演

議長　飯島宗一・広島大学学長

発表者　(1) 都留重人・一橋大学名誉教授

(2) Clark Kerr・カーネギー高等教育政策審議会会長

現代社会の文化的，社会的，政治的，経済的状況における高等教育の全体像をマクロな視点から位置づけ，高等教育の未来を展望する都留氏は，教育投資的発想の限界を訴えて，高等教育自身の本来の意味を強調し，カー氏は，高等教育が黄金時代を終わって凍結時代を迎えているという通念を批判し，高等教育は人々が生活を真に豊かにするために今後とも廃れることはあり得ないとの碩学らしい中味の濃い講演をされた。討議では既に高等教育が大衆化段階にある欧米や日本の参加者と，国造りのために高等教育の支えを強く求める途上国からの参加者の問題意識の焦点の違いが浮き彫りにされた。

都留教授は日米をはじめ世界各国で進学率が著しく増加したにもかかわらず，大学卒業者に対する雇用の需要がそれほど増加せず，今や教育投資としての高等教育は危機にひんしており，高等教育は消費的価値体系の中で考えられなければならないとのべ，高等教育の今後のあり方は市場指向の社会需要によって方向づけられるべきではなく，先進工業国と発展途上国との生産力，生活水準等の格差の是正や公害の克服などに尽力し，諸科学に人類の福祉と平和に寄与できるかどうかを基準とする価値観を導入して社会の要請に答えるものでなければならないと主張した。都留教授が高等教育の現状に批判的な厳しい態度で発言したのと対照的に，カー氏は都留氏のような見方が，高等教育の「氷河時代」として一般に受け入れられていることを認めつつも，アメリカの場合には，「氷河時代」という認識は1945年から70年までの学生数，予算，施設の異常な拡大をみた「黄金時代」に比しての「氷河時代」であって，これらの教育指標は伸びこそとどまっているが最高の時点の水準を維持しているのであって，それほどの危機状況にはないとの認識を示した。カー博士は大学は教会や国家やその他社会の主要な制度に比べてはるかに保守的かつ永続的なスタイルを維持しており，この8世紀というもの印刷術と電子工学の影響をのぞけば，ほとんど技術的な変化さえとり入れていないことを指摘し，大学は社会機能の複雑化につれてゆるやかに新しい展望を持つようになってきているという。新しい時代の大学は，社会正義の推進，生活の質の向上，政治的改革の促進，若者の世話を行う継続的な責任，未来の社会についての体系的な思索等の機能をはたすべきものであって，単なる再生機能をこえてより困難な変化の機能を果たさなければならないが，一たび動きはじめた教育の歯車はその動きをおさえることはできない。新しい時代においても大学人は新しい展望のもとにこれら新たな機能を創造的に行っていくであろうとのべた。

討論では，都留，カー両氏の発題に対して途上国の立場から補足ないし批判的な見解がなげかけられた。タイ国のプイ氏は，途上国においては高等教育の需要供給関係を調整することが格段に困難で，安易な高等教育の拡大は失業と高卒者労働市場の撹乱を惹起する実情を指摘し，カー氏の新しい時代の展望に関して，途上国においては「氷河時代」の困難と，新しい時代の課題とに同時に直面せざるを得ないとのべ，途上国の現状は先進国に

おけるもの以上に複雑かつ困難であることを強調した。前ガーナ大学学長のクワポン国連大学副学長は，途上国における大学の機能が，先進国の大学の機能よりも広範囲かつ重大であって，ことに世論形成の役割が大きいことを指摘し，つぎに，途上国政府が大学に人材の供与を求める需要が実際的な必要にもとづくものであって，この点から大学のできることと出来ないこととの明解な規定が要求されており，さらに国連大学をこのような途上国の必要とする大学発展のために国際的な基盤を提供できるものに育てたいとの希望をのべつつ，世界各国の社会の発展段階の多様性に応じて，大学のはたすべき機能も多様であらねばならぬと強調した。ヘスター国連大学長も基本的にクワポン氏の思想を裏書きし，さらに国連大学のあり方は既存の高等教育機関の創造力を国際的な連帯機構を創出してこれに組み入れることによって強化することにあるとのべ，様々な課題にたいして国連大学が多様な対応の用意をすすめている姿勢を表明した。

ユーリック氏は，新しい酒には新しい酒袋がなければならないとの思想でこれらの意見をとりまとめた。ユーリック氏はアメリカの高等教育史を例にとり，アメリカの第一段階の大学が牧師，医者，法曹を志す人々に対して一般教養を与えるリベラル・アーツ・カレッジにはじまり，ついで第2段階で，19世紀中葉国民の8割をこえた農民の生活改善にこたえるための農工大学の成立をみ，つづいて20世紀初頭の初中教育の普遍化にともなう教師の養成のために師範学校が成立し，やがてこれが社会の需要にこたえて各州の4年制州立大学となり，さらに第2次世界大戦後の高等教育の普遍化の要求にこたえ，職業教育と中等教育および高等教育のつなぎの役割をはたす，第4のタイプとしてのジュニア・カレッジが生まれたことを説明し，根本的に変動する社会の需要にこたえるためにはそれぞれの需要に正面からこたえる新しい機関が生まれでてこなければならないのであって，既存の制度の改革では不十分であるとの見解を示した。ユーリック氏は国際化しつつある現代世界の新しい高等教育の需要にこたえるべき一つの試みとして国連大学の設置を高く評価し，途上国をも含む新たな国際環境の中での高等教育の創造的な対応のための新しい制度の創出を要請した。

なおフセン，西田，ジャンヌ，クローグの諸氏から，新しい時代の高等教育について積極的な展望の必要性が説かれ，それぞれの私見が開陳された。

第1セッション

議　長　Hans Leussink・元ドイツ連邦共和国教育科学大臣

発表者　(1) Torsten Husén・ストックホルム大学教授

(2) 天　城　勲・文部省顧問（高等教育懇談会高等教育計画部会主査）

現代社会は高等教育の機会をどのように保障しており現在いかなる問題をはらんでいるか，また今後の高等教育の需要に対応するためには，高等教育の機関はどのように開かれるべきかをテーマにして討議が展開された。

Husén 氏は，ヨーロッパ諸国における高等教育の爆発的成長の現状を詳細に報告しつつ，高等教育大衆化の現実が，非伝統的な知識水準においても，学習態度においても従来考えられてきた高等教育者の内容を摂受する準備のない者を受け入れることとなり，そのためにもたらされる困難に注意を喚起した。天城氏は，高等教育への接近の問題は，機関の側からみれば入学許可が問題となることに焦点を合わせ，「接近」の意味，「高等教育」の意味，高等教育と中等教育の関係，高等教育と社会との関係を分析した後で，日本の入試から就職を経て終身雇用に至る制度の定着による高等教育と社会との一帯制を指摘し，大学問題は社会の問題にほかならないことを強調した。

討論においては，まずフセン氏の提示した伝達技術，学習技術，および学習動機を選考基準とする提案に対して，途上国や日本からそれぞれの事情にもとづく反論が出された。コロンビアのロンドーニョ氏は，途上国，とにコロンビアにおいては大学は教育の最終目標であり，1960年に2万3千人であった大学生数が74年には15万3千人となり，85年の目標は30万人としている現状からみて，動機の問題は2次的であり，むしろ社会的経済的条件による高等教育への接近の機会の制限の方が，より緊急に解決を要する問題であるとのべた。タイ国のブイ氏は，タイ国においても高等教育への接近の意欲は十分であるけれども，動機の中身が問題であると指摘，大部分の学生が自己の適性を吟味することなく，もっぱら医学，工学ないしは会計学の学科に進学しようとするのであって，これは正しい学習の動機とはいえず，ひとえに卒業後の経済的報償を求めての悲しむべき倒錯であると概嘆した。ブイ氏は真の学習動機は学習技術と不可分であって進学希望者の内心からの意欲を尊重すべきである旨の主張を行った。また，イランのサミー氏は，大衆の高等教育への要求，大学の高水準維持の追求とともに，人材の供給ならびに機会均等の保障という国家の必要を考慮しなければならない。イランでは，2年前にこれまでの試験方法をやめ，ペルシャ語，外国語，ペルシャ文化および進学適性検査からなる新しい試験方法を採用したとのべ，国ごとにその特性を生かさなければならないと主張した。

つぎに天城氏の提起した制限的入学者選考方法ないし競争入試が中等教育に影響を与えるという命題について，ジャンヌ氏から制限的ないし非制限的採用方針によって影響をこうむるのは表面的な学習動機のみであり，真の意味での学習意欲はそのような要素によって影響を受けないのではないか，との発言があったが，ビタウ氏から日本の現状では入試のためにすべてを犠牲にするのはこの他に選択の余地がないのであり，きわめて大量の入学志望者を短時間のうちにふるい分けるためには，伝達能力も学習能力も試験するのは不可能で，もっぱら中等教育において何を学び何をおぼえてきたかを試験する他ない実情が説明された。この点について寺崎氏が，高等教育への選考は中等教育を完成しているか否かの確認にもとづくべきであり，大学入試問題作成には，中等教育の教員があたるべきであると同時に大学入学者の決定は大学の自治の問題とからんでいるからこの点も無視できないとのべたところ，ロイシンク氏からドイツにおける大学入試資格試験は中等教育，高等教育の双方が関与して作成される旨のコメントがなされた。さらにイタリアのビニアッテリ女史からコメントがあり，イタリアでは全員入学制をとり極めて多数の新入生がいる

が，在学中に厳しい試験を課し，不適格者を退学させることによって卒業生の質の維持をはかっている旨の事情説明があった。

大学と社会との関係については，中山氏から終身雇用制度と生涯教育との関連に関して職場側の意識の変革の必要性が説かれ，飯島氏から学習の動機の問題に関連して，これはむしろ入試基準とすべきものではなく，高等教育を受けているうちに次第に育ってゆくべきものであり，大学がこれに答える機能をはたさない時に大学紛争や学習の低調をきたすのであるから，困難な状況の中でも大学は教育の目標を再構成しつづけ，社会変動に対応しうるような人格の形成に資するよう努力すべきであるとの自覚が表明された。

議長及び外国側参加者の要請に応えて，我が国の高等教育改革計画の現状について天城氏からその概要が説明された。天城氏は現在日本には，約1,000の高等教育機関と約200万の高等教育在籍者がいるものの総合的な高等教育政策は欠如しており，具体的な施策の中の主だったものとして，公費による私学に対する財政援助，今後5年間原則として私学の拡大を抑制すること，および新しい型の職業訓練指向の専修学校が制度化されたことを指摘し，法制的な高等教育の強化の日本における実態を要約した。これに対してカーネギー財団のパイファー氏は，今後の課題の中心はエリート機関に損失を与えることなく高等教育機関を如何にして多様化するかの問題にかかっており，ことに地方的なコミュニティ・カレッジに対する助成の進展がすでに全米各州の中心的な研究大学の財政を圧迫している実情にかんがみ，今後とも研究水準の維持向上と高等教育の普遍化の両立が最もむずかしい問題でありつづけるであろうと予想した。

最後にICEDの考え方についてパーキンス理事長から説明があり，各国高等教育の社会構造，高等教育の背景としての中等教育制度の性格，各国における大学者選抜制度，大学選択の指標，雇用の見通し，学生の課題選択基準などに関心が寄せられているとの説明がなされた。

第2セッション

議　長　　小　林　哲　也・京都大学教授

発表者　　(1) 新　堀　通　也・広島大学教授

(2) Henri Janne・元ベルギー教育文化大臣（ブリュッセル大学教授）

現行の高等教育システムの全体構造，社会に対して果たしているその機能は，どのような矛盾と問題をはらんでいるか，今後の個人的，社会的必要性に対応するためには，高等教育の機能と構造はどのような変革を必要としているか，をテーマとする第2セッションでは，新堀教授が社会学的なアプローチから，高等教育の危機は，脱工業化社会の必然的な帰結として到来し，伝統的に確立していた学問への信頼が根底から揺らいでいることを指摘した。新堀氏は，大規模化した大学の官僚化，大衆化，社会依存の傾向が，大学内部の対立激化，研究教育面における質の低下，学者の過大な世俗的学外活動などの病弊が進

行していることを指摘した。

ジャンヌ氏は，高等教育の多様化と量的な膨脹とを同時に経験した欧州諸国が，これに対応して実施した学校制度の構造改革について紹介した。高等教育の大衆化へ向かっての政治的圧力のために，知的エリートの育成を目的とする伝統的な大学だけではやりきれなくなって，職業訓練的要素を取り込んだ新しいタイプの高等教育機関が次々に生み出されて高等教育が複雑化しつつある現状を，旧大学内への新設講座の設置，既設大学傘下への地域協力型のカレッジの設置，多目的短大の設置などの実例をひいて説明した。ヨーロッパ諸国の大学では，大学の構造が大きな変動期にあるので，学内管理部局の分散，政府の権限の強化，労働市場との関連の密着化，大学内部における深刻な理念の対立，政治的な影響の学内への浸透など，伝統的な大学では考えられなかったような新しい問題が続出していることを述べ，大学が最高の知識の源泉としての本質を維持するためには，一方で課題中心の学習や主体的自己学習を強化するとともに，大学院を中心とした学術研究の核の充実が重要であると強調した。

討論では高等教育を全体的に統合する施策を具体的にどうしていくべきか，また西欧以外ではどうなっているかの問題に議論が集中した。まず日本の状況について，国立教育研究所の成田氏は日本における中等教育以後の教育制度には，二年制および三年制の短大，四年制または六年制の大学があり，タイプの面からみれば十分に多様化されているが，問題はタイプ相互間のトランスファーラビリティの欠如のために全体的合一性が欠如している点にあると指摘した。イギリス・ランカスター大学のロス氏は，社会の様々な要求に対してこれに答えるべき種々別々の形態の対応を高等教育が果たさなければならないとし，高等教育多様化の状況を70年代については制度内の多様化，80年代については制度自体の多様化によって類型化した。

次に今日の大学問題に関する通説についてユーリック氏があやまりを指摘し，まず第一に高等教育の質が低下したという通説が誤りであって，医学をとってみても法学をとってみても今世紀の初めにはおよそ今日程の基準設定はなかったのであって，教育の質が下ったという通念は幻想にすぎないと説明した。第二に最近の高等教育の特徴が多様化にあるとの考え方があるが，高等教育の歴史を追えば，多様化の趨勢は一貫してみられるものであって，神学教育からリベラル・アーツへ，ランドグラント・カレッジの設立と共に行われた自然科学の導入，さらには教員養成の高等教育への進出など，いずれも時代の進展とともに多様化したことが説明された。また，クームズ氏は，人々が学習する課程が一つには大学が批判的な機関として存在することに由来し，大学自身の成果を一般社会にあてはめることによって創造的な反応がおこること，第二に教育者は正規でない型の教育に関心を寄せるけれども，往々にしてこのような学習は教育機関の責任としての回避であることを指摘した。

広島大学の今堀教授は，広島大学でこの会合が開かれることの意味を広島が人類最初の原爆被爆地であることにみ，原爆の意味を自然科学に価値観を持ちこんだことにあると主張した。さらにこの論をすすめて今堀氏は，大学は平和のために存在しなければならない

ものであり，その理念が広島大学の総合科学部設定の基礎になっているとのべた。

受けて飯島学長は，参加者のホーホライトナー氏と共に，議論はこれからであり，今堀氏同様に大学を価値観創造の場として生かしたいとの希望を表明した。飯島学長は，大学は民主主義と貴族主義が共存する組織体であり，社会に先がけて悩む宿命にあり常に矛盾と戦わなければならないが，この会議は希望を示すものであり，連帯感の発生を示唆するものであって今後とも努力を続けて行きたいと言明した。

シンポジウム

議　長　　James A. Perkins・ICED理事長

報告者　(1) Harlan Cleveland・ASPEN人文科学研究所国際関係事業部長

(2) 阿　部　美　哉・日本学術振興会人物交流課長

シンポジウムは，討議の結果を踏まえて，21世紀に向かう将来において，十分に有効な高等教育システムは，いかなるものであるか，それはいかにして可能であるかを総合的に検討した。報告者は，まず阿部氏が基調講演，第1セッション，第2セッションのハイライトを整理し，日本側の視点からするとこれらの討議にもかかわらず，高等教育に対する社会の見方が高等教育と影響しあう内容の検討，さらに具体的には就職試験，大学入試，高校入試と教育制度の逆立ちした内容支配が持つ意味についてさらに検討が必要であろうと提唱した。

クリーブランド氏は討議全体をアイデンティティーのテーマでとらえて，未来の高等教育への発展の基底におくべき精神的・体制的構造的統合の可能性についての見通しを開陳した。

スペインのホーホライトナー氏は教育の問題が根本に未来社会を信じ未来を信ずる行為であるとのべ，高等教育の考察において就職の問題を過大に重視することは誤りであり，必要なことは初等中等教育と高等教育との関連を強化確立する方向におくことであるとのべた。

新堀氏は，構造の問題において，多様化と階層化との葛藤は解消に向かっているが，日本の社会では閉鎖主義と向上志向との関係がアクセスとトランスファーラビリティとの関係に比例していることにかんがみ，高等教育における可動性を高めることはそれなりの緊張を招来せざるをえないと観察した。

イランのサミー氏は学生の勉学意欲を強化する施策の必要をうったえ，未来の高等教育のためのガイドラインを定めて勧告せられたい旨発言したが，アメリカのクローグ氏は，高等教育に関する政府の立法処置はしばしば無知と官僚的硬直性のために不必要な問題をおこしていると指摘し，高等教育自体が自立的にその知性を発揮することの重要性を強調した。

ルブリ・フランス文部省官房長からは，高等教育の量的拡大が高等教育を政治問題と化したことに注意を喚起され，法政大学の尾形憲氏からは制度化された大学における学位取

得を目的とする一般学生の学習意欲の欠如とむしろニセ学生や夜間部学生に教育に対する強いモチベーションが認められることが指摘され，高等教育の未来が生涯教育の可能性として，体制外の底辺の人々の根強い動機に支えられるであろうとの展望が示された。

最後にパーキンス，ICED 議長が，これからの高等教育の主要なテーマとして，

1　質の維持と平等主義をどのようにして均衡させるか。
2　高等教育機関をいかに多様化し，多様化した機関間のネットワークをいかにして形成するか。
3　高等教育の納税者に対する公共的責任をどのようにして明確化するか。
4　高等教育の幅をどこまで広げ，選択性をどこまで与え得るか。
5　高等教育を階層階梯を上るためのものから，人生の質を高めるためのものに切り替える方向がどこまで進み得るか。
6　大学のサービス・センターとしての役割がどこまで広がり得るか。
7　高等教育の国際化がどこまで進むか。

などの諸点があると述べ，いまや高等教育のテーマは，大学の自治の問題から高等教育の構造的変革の問題に移行していると解説して，会議をしめくくった。

参加者の討議は，① 既に高等教育人口が同一年齢層の40%に近い米国及び日本，② 高等教育人口が約20%となり，その多様化に苦吟しているヨーロッパ諸国，③ 国の開発のためのマンパワーに対する強い需要を満たすために，実用的人材の養成に力を注がざるを得ない途上国の人々の三群に分かれ，それぞれの問題意識にかなり大きなずれがあった。殊に途上国の人々の意見は，途上国からの問題提起論文がなかったこともあって，先進国諸国の人々とは異なった問題があるという，批判的な議論が多数であった。既に大衆高等教育からその普遍化の段階に近づいているアメリカや日本からの意見が，大学に要求される新しい社会的機能の考察に向かい，その質的な側面に集中したのに対し，大衆高等教育の段階に既に突入しつつあるヨーロッパ諸国の人々の意見は，多様化の方法等，量的対応ないし，技術的な検討に焦点をおく傾向があった。特段の結論とか，勧告とかが出たわけではないが，現在の高等教育の問題点が様々な世界において，多様な意味をもつことを明らかにしたこのセミナーは，未来の高等教育を考えうるうえで貴重な一里塚になるものと信じられる。

参加者は外国から，カー・元カリフォルニア大学総長，ロイシンク・元ドイツ連邦共和国教育科学大臣，ジャンヌ・元ベルギー国文部大臣，クリーブランド・元ハワイ大学総長，ヘスター・国連大学長，パーキンス・元コーネル大学学長，クームズ・ユネスコ国際教育開発研究所初代所長，エーリック・ニューヨーク州立大学初代学長，フセン・ストックホルム大学教授，ライノヴィッツ弁護士，ロンドーニョ・元コロンビア国文部大臣，ロス・ランカスター大学教授，ピーニャテリ・ローマ大学教授，ルブリ・フランス大学庁官房長，クローグ・ジョージタウン大学教授，ホーホライトナー・スペイン国立教育開発研究所長，バイファー・カーネギー財団理事長，ブイ・タマサート大学学長，サミー・イラン国文部大臣，クワポン・国連大学副学長等，高等教育にかんする立案，施策，実施いずれの

面においても世界最高の顔ぶれが揃った。これを迎えた日本側参加者は，都留重人・元一橋大学長，天城勲・文部省顧問，木田宏・文部省学術国際局長(現文部次官)，岡本道雄・京都大学総長，村井資長・早稲田大学総長，加藤一郎・前東京大学総長，中川秀恭・国際キリスト教大学長，飯島宗一・広島大学長，川上正光・東京工業大学長，ピタウ・上智大学長，西田亀久夫・文部省科学官，皇至道・広島大学名誉教授など，わが国最高の学長職や大学管理の責任者に加えて，新堀道也・広島大学教授，今堀誠二・広島大学教授，井門富二夫・筑波大学教授，小林哲也・京都大学教授，久保田きぬ子・成蹊大学教授，横尾壮英・広島大学・大学教育研究センター長，前田陽一・国際文化会館専務理事，中山茂・東京大学講師，成田克矢・国立教育研究所高等教育研究室長，尾形憲・法政大学教授，寺崎昌男・立教大学教授，潮木守一・名古屋大学助教授など，第一線で活躍中の高等教育の研究家が参会した。これら正式参加者の他に全国から約100名の高等教育に関心を寄せる大学教官や教育関係者，ジャーナリスト等がオブザーバーとして参加した。

(阿部美哉記)

January 1977

Edited and Published by
Research Institute for Higher Education
Hiroshima University
Hiroshima, Japan

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